

DUSTER

1 Engine and peripherals

17B

PETROL INJECTION

V42 Injection

Program No.: 2A

Vdiag No.: 04, 06

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V1

Edition Anglaise

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1. SCOPE OF THIS DOCUMENT

This document presents the fault finding method applicable to all computers with the following specifications:

Vehicle(s): LOGAN, SANDERO, DUSTER

Engine: K7M714, K4M694, D4D760, K4M606

Function(s) concerned:

Petrol injection,

Flex Fuel Injection

Name of computer: V42

Program No.: 2A

Vdiag No.: 04, 06

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this manual):

- Assisted fault finding (integrated into the **diagnostic tool**), Dialogys.

Wiring Diagrams:

- Visu - Schéma.

Type of diagnostic tools

- CLIP

Special tooling required

Special tooling required	
Diagnostic tool	
Elé 1590	128-track computer bornier
Ele. 1681	universal bornier
Mot 1711	Injector flow measuring kit
Multimeter.	

3. SAFETY INSTRUCTIONS

Safety rules must be observed during any work on a component to prevent any material damage or personal injury:

- Make sure the battery is properly charged to avoid damaging the computers if there is a low charge.
- Use the appropriate tools.

4. REMINDER

To run diagnostics on the vehicle computers, switch on the ignition using the key

To switch off the + after ignition feed, switch off the ignition using the key.

Injection computer:

The injection computer is located in the engine compartment, behind the battery.

TDC sensor:

This sensor is located on the gearbox casing, behind the engine.

Pinking sensor:

This sensor is located between the four injectors.

Refrigerant pressure sensor:

This sensor is located on the air conditioning circuit.

Injection coolant temperature sensor:

This sensor is located on the engine water chamber.

Injection air temperature sensor:

The air temperature sensor is located at the air circuit inlet.

Downstream oxygen sensor:

The downstream oxygen sensor is located on the exhaust pipe downstream of the catalytic converter.

Upstream oxygen sensor:

The upstream oxygen sensor is located on the exhaust pipe after the manifold.

Accelerator potentiometer:

The potentiometer is located on the accelerator pedal.

Brake light switch:

The switch is located on the brake pedal.

Injectors 1, 2, 3, 4:

The injectors are mounted on the engine.

Motorised throttle valve:

The damper valve is located in front of the inlet manifold.

Quadruple ignition coil module (D4D and K7M engines):

The coil module is located in the engine compartment.

Cylinder 1, 2, 3, 4 pencil coils (K4M engine):

They are located on the cylinder head.

Catalytic converter:

The catalytic converter is located on the exhaust pipe downstream of the catalytic pre-converter.

Fan unit relay:

The relay is located on the cooling radiator.

Injection computer:

The injection computer receives information from various sensors and sends control signals to various actuators according to mappings that it has stored in the memory.

TDC sensor:

This sensor allows the computer to provide synchronisation as well as to know the position Top Dead Centre for injection phasing.

Pinking sensor:

This sensor allows the computer to correct the ignition advance under high engine load to avoid damaging the engine.

Refrigerant pressure sensor:

The role of the sensor is to measure the refrigerant fluid pressure in the air conditioning circuit.

Injection coolant temperature sensor:

The engine coolant temperature sensor informs the computer about the engine coolant temperature.

Injection air temperature sensor:

The air temperature sensor provides the computer with the temperature of air taken in by the engine.

Oxygen sensors:

The oxygen sensors allow the catalytic converter to correctly perform engine emission control tasks.

Accelerator potentiometer:

The potentiometer allows the computer to take into account driver requests expressed using the accelerator pedal.

Clutch pedal switch:

This switch allows the computer to convert to anti-jerking mode when the clutch pedal is depressed.

Brake light switch:

The brake light switch informs the computer of the brake pedal status.

Two gangs are used if the cruise control function exists.

Injectors:

These injectors enable rapid, precise metering of the quantity of fuel injected, with excellent injection process repetitiveness.

Motorised throttle valve:

The throttle valve allows engine air flow to be managed according to driver requests.

Quadruple ignition coil module (D4D and K7M engines):

The ignition unit enables ignition (explosion timing control).

Cylinder 1, 2, 3, 4 pencil coils (K4M engine):

The pencil coils enable ignition (explosion timing control).

Fan unit relay:

The engine cooling fan unit relay supplies power to the engine cooling fan.

D4D760



1. Air filter
2. Motorised throttle valve
3. Injection air temperature sensor
4. Manifold pressure
5. Injectors
6. Ignition coils
7. Injection coolant temperature sensor
8. Pinking sensor
9. TDC sensor
10. Upstream oxygen sensors
11. Downstream oxygen sensors
12. Injection computer
13. Auxiliary cold starting system
14. Auxiliary fuel tank
15. Auxiliary fuel
16. Petrol/alcohol tank
17. Petrol pump
18. Bleed valve

K4M694



1. Air filter
2. Motorised throttle valve
3. Injection air temperature sensor
4. Manifold pressure
5. Injectors
6. Ignition coils
7. Injection coolant temperature sensor
8. Pinking sensor
9. TDC sensor
10. Upstream oxygen sensors
11. Downstream oxygen sensors
12. Injection computer
13. Auxiliary cold starting system
14. Auxiliary fuel tank
15. Auxiliary fuel
16. Petrol/alcohol tank
17. Petrol pump
18. Bleed valve

K7M714



1. Air filter
2. Motorised throttle valve
3. Injection air temperature sensor
4. Manifold pressure
5. Injectors
6. Ignition coils
7. Injection coolant temperature sensor
8. Pinking sensor
9. TDC sensor
10. Upstream oxygen sensors
11. Downstream oxygen sensors
12. Injection computer
13. Auxiliary cold starting system
14. Auxiliary fuel tank
15. Auxiliary fuel
16. Petrol/alcohol tank
17. Petrol pump
18. Bleed valve

K4M606



1. Air filter
2. Motorised throttle valve
3. Injection air temperature sensor
4. Manifold pressure
5. Injectors
6. Ignition coils
7. Injection coolant temperature sensor
8. Pinking sensor
9. TDC sensor
10. Upstream oxygen sensors
11. Downstream oxygen sensors
12. Injection computer

Engine immobiliser

This Verlog 2 type immobiliser function is managed by the UCH computer and the injection computer. Before any starting request, the injection computer is protected.

When a starting request is made, the injection computer and the Passenger Compartment Control Unit (UCH) exchange authentication data via the multiplex network. This determines whether the engine start is authorised or denied.

After more than five consecutive failed authentication attempts, the injection computer goes into protection (anti-scanning) mode and no longer tries to authenticate the UCH computer. It only leaves this mode when the following sequence of operations is carried out:

- the ignition is left on for at least **20 seconds**,
- the message is switched off,
- the end of the injection computer self-feed is adhered to (the length of time varies depending on engine temperature).

After this, one and only one authentication attempt is allowed. If this fails again, repeat the sequence of operations described above.

If the injection computer still fails to unlock, contact the Techline.

Impact detected

If an impact has been **stored** by the injection computer, turn off the ignition for **10 seconds**, then switch it back on to start the engine. Clear the faults using the control **RZ001 Fault memory**.

WARNING

Disconnect the injection system computer when carrying out any welding work on the vehicle.

ENGINE SPEED MANAGEMENT

Engine speed management is based on the following programs:

- Engine speed management when starting
- Engine speed management according to engine vibrations
- Idle speed management
- Engine speed restriction
- Engine speed management according to its status

Engine speed management when starting

This programming is used:

- To set the injection timing when starting, using the TDC (Top Dead Centre) sensor
- To calculate the amount of fuel to be injected into the cylinders to avoid flooding the engine.

Preventive correction of engine speed linked to vibrations

Programming that enables user comfort to be optimised during acceleration or deceleration which causes a harsh change in engine torque and therefore vibration in the driveshaft. Torque management is important during these situations.

Curative correction of engine speed linked to vibrations

This programming is used to absorb the oscillations in engine speed caused by vibration in the driveshaft.

Idle speed management

This programming is used to calculate the adapted idle speed according to the conditions of use (cold engine, air conditioning requests, electrical consumer use etc.).

Air supply

This is managed by a motorised throttle valve which is controlled by the injection computer.

The injection computer also performs the following tasks using the motorised throttle:

- management of valve oscillations which can produce undesirable torque,
- management of valve movement subject to mechanical faults when the valve reaches its mechanical boundaries,
- management of acoustic faults by limiting throttle opening at a certain engine speed and when stopping the engine.

Torque management

The torque structure is the system for managing engine torque. It is necessary for some functions such as the electronic stability program (ESP), automatic transmission (BVA) or sequential gearbox (BVR).

Each computer (ESP, sequential gearbox, automatic transmission) sends a request for torque via the multiplex network to the injection computer. This arbitrates between the various torque requests and the driver's request (made via the accelerator pedal or the cruise control/speed limiter).

The result of this arbitration gives the torque setpoint. The computer then calculates the throttle position setpoint, the ignition advance *and the wastegate setpoint* (if a turbocharged engine) in order to provide the necessary torque.

Ignition management

Management of ignition advance enables the combustion quality to be managed and therefore engine operation to be optimised. For a positive advance, the ignition point will be before TDC*, however the advance can have a negative value.

TDC*: Top Dead Centre.

Fuel supply management

The fuel pump ensures the supply of fuel. It is activated for one second each time the + after ignition feed is switched on. It ensures the correct level of pressure in the circuit and thereby achieves correct engine starting, particularly if the vehicle has not been used for a long time. When the engine is running, the pump relay is controlled and therefore the pump is always active.

The petrol vapour absorber enables petrol vapour to be collected in order to limit its release into the atmosphere.

Richness adjustment

Richness is managed using the upstream and downstream oxygen sensors located on the exhaust. For the sensors to be operational quickly, they need to be heated by the exhaust gas and by a resistor internal to the sensor. These sensors reflect the efficiency of combustion and, using information sent to the computer, they enable the quantity of fuel injected to be managed in order to meet the emission control standards and to ensure optimum engine operation.

Engine temperature management

The engine is cooled by a 2-speed fan assembly.

To cool the engine, the first speed of the GMV* is activated if the coolant temperature exceeds **99°C**, then the second speed is activated if the temperature exceeds **102°C**. A "very high temperature" warning light illuminates on the instrument panel if the temperature exceeds **108°C**.

GMV*: Fan assembly

OPERATIONS FOR REPLACING OR REPROGRAMMING THE COMPUTER

Procedure to be applied before replacement

This procedure must be applied before replacing or reprogramming the injection computer (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

IMPORTANT:

- The computer permanently stores the immobilisation function code. It is forbidden to perform tests with computers borrowed from the Parts Department or from another vehicle.
- Connect a battery charger and switch on the vehicle + after ignition feed.
- Switch off all the electrical consumers (lights, interior lighting, air conditioning, radio, etc.).

- Connect the diagnostic tool (mains or cigarette lighter supply).
- Save the data by running command: **SC003 Save computer data**. In the event of a fault, contact the Techline.
- In the event of a **replacement**, note the vehicle **VIN code** using command **ID008 VIN code**.
- Switch on vehicle + after ignition feed and wait until **the coolant temperature** is less than **70°C** and **the air temperature** is less than **50°C**. Consult parameter **PR064 Coolant temperature** and **PR059 Air temperature**.

IMPORTANT:

It is necessary to respect these temperature values in order to carry out the computer programming or reprogramming operations.

- Apply the programming or reprogramming operations described in **Technical Note 3585A Computer (re)programming procedure**.

IMPORTANT:

After (re)programming the computer, switch off the + after ignition feed and wait for the loss of communication message to appear on the diagnostic tool, if the message does not appear, wait for **9 minutes**. Failure to follow this procedure may cause the computer data to be corrupted.

Procedure to be applied after repair:

This procedure must be applied after replacing or reprogramming the computer.

Entering the saved data

- enter the saved data by running command **SC001 Write saved data**.

Programming the VIN code

- Display the identifier **ID008 VIN code**
If the **VIN** is not entered, enter the **VIN** using command **VP010 Enter VIN**.

Injection computer initialisation

Start and stop the engine to initialise the computer and wait for the loss of communication message to appear on the diagnostic tool, if the message does not appear, wait for **9 minutes**.

The computer is automatically configured according to the sensors and options present on the vehicle.

If the data were not saved before the operation, carry out the following operations:

- **Programming the VIN code**
- Enter the V.I.N. using command **VP010 Enter VIN**.

– **Injector programming**

Program the injectors by accessing the sub-section entitled **Injector replacement operations**.

– **Programming the TDC sensor**

Program the TDC sensor by accessing the sub-section entitled **TDC (Top Dead Centre) sensor replacement operations**.

– **Programming the motorised throttle**

Program the motorised throttle by accessing the sub-section entitled **Throttle valve replacement operations**.

– **Injection computer initialisation**

Start and stop the engine to initialise the computer and wait for the loss of communication message to appear on the diagnostic tool, if the message does not appear, wait for **9 minutes**.

The computer is automatically configured according to the sensors and options present on the vehicle.

THROTTLE VALVE REPLACEMENT OPERATIONS

- When replacing the inlet throttle valve, switch on the vehicle + after ignition feed, after replacing the part.
- Carry out resetting using command **RZ031 Throttle stop programming**.
- Switch off the ignition. The inlet valve will run a new programming procedure whilst maintaining the supply (power latch) due to the reinitialisation phase.
- Check that the programming is correct using status **ET051 Throttle stop programming**, it must be at **1**. If programming was not performed correctly, repeat the operation from the start.
- If the fault is still present, contact the Techline.

OPERATIONS FOR REPLACING THE BRAKE PEDAL SWITCH

- When replacing the brake pedal switch, switch on the vehicle + after ignition feed, after replacing the part.
- Check that the switch statuses change as follows, when the brake pedal is activated:
 - **ET039** Brake pedal = **1** and **ET799** Brake Wire Contact = **1** when the brake pedal is **released**
 - **ET039** Brake pedal = **2** and **ET799** Brake Wire Contact = **2** when the brake pedal is **depressed**

OPERATIONS FOR REPLACING THE TDC (TOP DEAD CENTRE) SENSOR

- Switch on the vehicle + after ignition feed,
- Carry out resetting using command **RZ037 Flywheel target programming**.

Operation for Programming

- Decelerate a first time with injection cut-off (feet off the brake, accelerator and clutch pedals) between **3500** and **3000 rpm**, in a gear above 3rd for at least 3 seconds for manual gearboxes.
- Decelerate a second time with injection cut-off (i.e. feet off the brake, accelerator pedal and clutch pedals) between **2400** and **2000 rpm**, in 3rd gear for a manual gearbox for at least 14 seconds.

BVM*: Manual gearbox

Programming was performed successfully when status **ET089 Flywheel target programming** is at value **1**.

OPERATIONS FOR REPLACING THE INJECTORS

- Switch on the vehicle + after ignition feed after replacing the part.
Carry out resetting using command **RZ033 Richness regulation programming**.
- Switch off the ignition.
A power latch is necessary to save the reset data.
- Switch on the vehicle + after ignition feed and check the values of the following parameters:
PR624 Richness regulation programming offset
PR625 Richness regulation programming gain
- Test the injectors using the following commands:
AC005 Cylinder 1 injector
AC006 Cylinder 2 injector
AC007 Cylinder 3 injector
AC008 Cylinder 4 injector.

Tool fault	DTC code	Diagnostic tool title
DF001	0115	Coolant temperature sensor circuit
DF002	0095	Air temperature sensor circuit
DF011	0641	Sensor supply voltage no. 1
DF012	0651	Sensor supply voltage no. 2
DF015	0657	Main relay control circuit
DF018	0480	Low-speed fan unit control circuit
DF026	0201	Cylinder 1 injector control circuit
DF027	0202	Cylinder 2 injector control circuit
DF028	0203	Cylinder 3 injector control circuit
DF029	0204	Cylinder 4 injector control circuit
DF038	0606	Computer
DF047	0560	Computer feed voltage
DF050	0571	Brake switch circuit
DF059	0301	Misfiring on cylinder 1
DF060	0302	Misfiring on cylinder 2
DF061	0303	Misfiring on cylinder 3
DF062	0304	Misfiring on cylinder 4
DF065	0300	Combustion misfire
DF078	2100	Motorised throttle control circuit
DF079	2119	Motorised throttle valve automatic control
DF081	0443	Canister bleed solenoid valve circuit
DF082	0135	Upstream oxygen sensor heating circuit
DF083	0141	Downstream oxygen sensor heating circuit
DF085	0627	Fuel pump relay control circuit
DF088	0325	Pinking sensor circuit
DF091	0500	Vehicle speed signal
DF092	0130	Upstream oxygen sensor circuit
DF093	0136	Downstream oxygen sensor circuit
DF095	0120	Throttle potentiometer circuit gang1
DF096	0220	Throttle potentiometer circuit gang 2
DF101	C121	ESP multiplex connection

Tool fault	DTC code	Diagnostic tool title
DF102	2503	Alternator power signal available
DF109	0313	Low fuel level misfire
DF120	0335	Engine speed sensor signal
DF361	1351	Ignition coil circuit 1-4
DF362	1352	Ignition coil 2-3 circuit
DF394	0420	Catalytic converter operating fault
DF398	0170	Fuel circuit operating fault
DF409	0461	Fuel level sensor circuit
DF457	0315	Flywheel target
DF532	2502	Alternator charge signal
DF556	2135	Pedal/throttle position consistency
DF631	0703	Brake light switch signal
DF648	060B	Computer
DF721	0217	Engine overheating
DF884	2632	Additional fuel circuit pump relay
DF887	0226	Brake - accelerator pedal position
DF894	1633	Additional fuel circuit solenoid valve
DF974	0225	Pedal potentiometer circuit gang 1
DF975	2120	Pedal potentiometer circuit gang 2
DF992	1644	Additional heater 1 relay circuit
DF993	1645	Additional heater 2 relay circuit
DF994	1646	Additional heater 3 relay circuit
DF1015	0504	Brake switch signal consistency
DF1017	061A	Computer
DF1058	0106	Inlet pressure consistency
DF1063	C415	ESP multiplex connection
DF1068	0530	Refriger* pressure sensor voltage
DF1072	0645	Air conditioning compressor relay control
DF1074	0638	Motorised throttle position inconsistent
DF1355	1656	Multiplexed torque regulator connection

*Refriger: refrigerant

DF001 PRESENT OR STORED	COOLANT TEMPERATURE SENSOR CIRCUIT 4.DEF: Voltage too low 5.DEF: Voltage too high 6.DEF: Micro-cut
NOTES	Special notes: – The OBD and Level 1 warning lights illuminate.
See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .	
<p>Check the connection and condition of the connector of the coolant temperature sensor, component code 244 and of the connections of the injection computer, component code 120. If the connector(s) are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>	
<p>Disconnect the injection computer connector, component code 120 (see MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). Measure the resistance of component 244 by connections 3JK and 3C of the injection computer connector, component code 120.</p>	
<p>If the resistance of the coolant temperature sensor, component code 244 is not between $100 \Omega \leq X \leq 10 k\Omega$ at ambient temperature: replace the coolant temperature sensor, component code 244 (see MR 388 or 451, Mechanical, 19A, Cooling, Coolant temperature sensor: Removal - Refitting).</p>	
<p>Check the insulation, continuity and absence of interference resistance on the following connections: – 3JK between components 120 and 244. – 3C between components 120 and 244.</p>	
<p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>	
<p>If the fault is still present, contact the Techline.</p>	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF002 PRESENT OR STORED	AIR TEMPERATURE SENSOR CIRCUIT 2.DEF: Signal outside lower limit. 3.DEF: Signal outside upper limit.
NOTES	Special notes: – The OBD and Level 1 warning lights illuminate.
See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .	
<p>Check the connection and condition of the connector of the air temperature sensor, component code 272 and of the connections of the injection computer, component code 120. If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>	
<p>Measure the resistance of the air temperature sensor, component code 272 between connections 3B and 3JQ. If the resistance measured is not between $300 \Omega \leq X \leq 6 \text{ k}\Omega$: replace the air temperature sensor, component code 272.</p>	
<p>Check the insulation, continuity and absence of interference resistance on the following connections: – 3B between components 799 and 120. – 3JQ between components 799 and 120. If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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V42_V04_DF002 / V42_V06_DF002

DF011 PRESENT OR STORED	SENSOR FEED VOLTAGE NO. 1 1.DEF: Above maximum threshold. 2.DEF: Below minimum threshold.
NOTES	Special notes: – The OBD and Level 2 warning lights illuminate.
See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .	
Disconnect the accelerator pedal sensor gang 1 , component code 921 then switch on the ignition. Wait several seconds so that the computer can update the fault status. If the fault changes from present to stored : Replace the accelerator pedal sensor gang 1 , component code 921 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal – Refitting). Disconnect the motorised throttle valve , component code 1076 then switch on the ignition (see MR 388 or 451, Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting). Wait several seconds so that the computer can update the fault status. If the fault changes from present to stored : Replace the damper valve position sensor , component code 1076 (see MR 388 or 451, Mechanical, 12A, Fuel mixture, Throttle valve: Removal - Refitting) referring to the Replacement of components section. Check the insulation, continuity and the absence of interference resistance on the following connections: – 3LR between components 921 and 120 , – 3LT between components 921 and 120 , – 3MN between components 1076 and 120 , – 3MO between components 1076 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF012 PRESENT OR STORED	SENSOR SUPPLY VOLTAGE NO. 2 1.DEF: Above maximum threshold. 2.DEF: Below minimum threshold.
NOTES	Special notes: – The OBD and Level 2 warning lights illuminate.
See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .	
Disconnect the accelerator pedal sensor gang 2 , component code 921 then switch on the ignition (see MR 388 or 451, Mechanical, 37A, Mechanical component control, Accelerator pedal: Removal – Refitting). Wait several seconds so that the computer can update the fault status. If the fault changes from present to stored : Replace the accelerator pedal sensor gang 2 , component code 921 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal – Refitting).	
Disconnect the manifold pressure sensor , component code 147 , then switch on the ignition. Wait several seconds so that the computer can update the fault status. If the fault changes from present to stored : Replace the inlet pressure sensor , component code 147 .	
Disconnect the freon pressure sensor , component code 1202 , then switch on the ignition (see MR 388 or 451, Mechanical, 62A, Air conditioning, Pressure sensor: Removal - Refitting). Wait several seconds so that the computer can update the fault status. If the fault changes from present to stored : Replace the freon pressure sensor , component code 1202 (see MR 388 or 451, Mechanical, 62A, Air conditioning, Pressure sensor: Removal - Refitting).	
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3LU between components 921 and 120 , – 3LV between components 921 and 120 , – 3AJP between components 147 and 120 , – 3AJR between components 147 and 120 , – 38Y between components 1202 and 120 , – 38U between components 1202 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF015 PRESENT OR STORED	MAIN RELAY CONTROL CIRCUIT CC.0: Short circuit to earth.
NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present: – switch on the powerlatch phase - switch off + after ignition feed and switch on the + after ignition feed again).
See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.	
Check the connection and condition of the connectors of the passenger compartment fuse box , component code 1016 , of the engine fuse box , component code 597 , of the injection computer , component code 120 and of the injection relay , component code 1047 (see MR 388 or 451, Mechanical, 87G, Engine compartment connection unit, Engine compartment connection unit: List and location of components). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.	
Check the condition and operation of the injection relay , component code 1047 . If the injection relay is faulty, replace the injection relay, component code 1047 (see MR 388 or 451, Mechanical, 87G, Engine compartment connection unit, Engine compartment connection unit: List and location of components).	
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3AA between components 1047 and 120 , – 3AC between components 1047 and 120 , – AP29 between components 1016 and 120 , – BP37 between components 597 and 1047 , – BP17 between components 1047 and 597 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF018 PRESENT OR STORED	LOW SPEED FAN ASSEMBLY CONTROL CIRCUIT CC.0: Short circuit to earth. CC.1: Short circuit to +12 volts.
NOTES	Conditions for application to a stored fault: The fault is declared present after the ignition has been switched on or after running command AC038 Low speed fan assembly relay See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
Run command AC038 Low speed fan assembly relay and check the supply of the low speed fan assembly relay control circuit using a test light on connection 3JN of component 120 .	
Check the connection and condition of the connector of the injection computer , component code 120 and of the low speed fan assembly relay , component code 784 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.	
Check the insulation, continuity and check for absence of interference resistance on the following connection: – 3JN between components 784 and 120 . If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
Run command AC038 Low speed fan assembly relay and check the supply of the low speed fan assembly relay power circuit using a test light on connection 49C of component 784 . If the check is not correct, replace the fan assembly control relay , component code 784 .	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF026 PRESENT OR STORED	<p>CYLINDER 1 INJECTOR CONTROL CIRCUIT</p> <p>CO: Open circuit. CC.1: Short-circuit on +12 volts. CC.0: Short circuit to earth</p>
NOTES	The fault changes from stored to present when the engine is running at idle speed.
	Special notes: For CC.1 and CO, the OBD and Level 1 warning lights illuminate. For CC.0, the Level 2 warning light illuminates.
	Measure the resistance of the injector between 0°C and 40°C.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
Check the connection and condition of the connector of the injection computer , component code 120 and of the cylinder 1 injector , component code 193. If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.	
Measure the resistance of the cylinder 1 injector , component code 193 between connections 3FB and 3CR. If the resistance measured is not between $11 \Omega \leq X \leq 20 \Omega$ (K4M and D4D engine) or $9.2 \Omega \leq X \leq 17 \Omega$ (K7M engine): replace the cylinder 1 injector , component code 193 (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting).	
Run command AC005 Cylinder 1 injector and check the operation of the injector with a listening test.	
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CR between components 193 and 120. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
With the ignition on, check for + 12 V on connection 3FB of component 193. If there is no + 12 V, check the continuity of the following connection: – 3FB between components 597 and 193. If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF027 PRESENT OR STORED	INJECTOR CYLINDER 2 CONTROL CIRCUIT CO: Open circuit. CC.1: Short-circuit on +12 volts. CC.0: Short circuit to earth
NOTES	<p>The fault changes from stored to present when the engine is running at idle speed.</p> <p>Special notes: For CC.1 and CO, the OBD and Level 1 warning lights illuminate. For CC.0, the Level 2 warning light illuminates.</p> <p>Measure the resistance of the injector between 0°C and 40°C.</p> <p>See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.</p>
	<p>Check the connection and condition of the connector of the injection computer, component code 120 and of the cylinder 2 injector, component code 194.</p> <p>If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p>
	<p>Measure the resistance of the cylinder 2 injector, component code 194 between connections 3FB and 3CS.</p> <p>If the resistance measured is not between $11 \Omega \leq X \leq 20 \Omega$ (K4M and D4D engine) or $9.2 \Omega \leq X \leq 17 \Omega$ (K7M engine): replace the cylinder 2 injector, component code 194 (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting).</p>
	<p>Run command AC006 Cylinder 2 injector and check the operation of the injector with a listening test.</p>
	<p>Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CS between components 194 and 120.</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
	<p>With the ignition on, check for + 12 V on connection 3FB of component 194.</p> <p>If there is no + 12 V, check the continuity of the following connection: – 3FB between components 1047 and 194.</p> <p>If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
	<p>If the fault is still present, contact the Techline.</p>

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF028 PRESENT OR STORED	<p>CYLINDER 3 INJECTOR CONTROL CIRCUIT</p> <p>CO: Open circuit. CC.1: Short-circuit on +12 volts. CC.0: Short circuit to earth</p>
NOTES	The fault changes from stored to present when the engine is running at idle speed.
	Special notes: For CC.1 and CO, the OBD and Level 1 warning lights illuminate. For CC.0, the Level 2 warning light illuminates.
	Measure the resistance of the injector between 0°C and 40°C.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
Check the connection and condition of the connector of the injection computer , component code 120 and of the cylinder 3 injector , component code 195. If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.	
Measure the resistance of the cylinder 3 injector , component code 195 between connections 3FB and 3CT. If the resistance measured is not between $11 \Omega \leq X \leq 20 \Omega$ (K4M and D4D engine) or $9.2 \Omega \leq X \leq 17 \Omega$ (K7M engine): replace the cylinder 3 injector , component code 195 (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting).	
Run command AC007 Cylinder 3 injector and check the operation of the injector with a listening test.	
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CT between components 195 and 120. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
With the ignition on, check for + 12 V on connection 3FB of component 195. If there is no + 12 V, check the continuity of the following connection: – 3FB between components 1047 and 195. If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF029 PRESENT OR STORED	<p>CYLINDER 4 INJECTOR CONTROL CIRCUIT</p> <p>CO: Open circuit. CC.1: Short-circuit on +12 volts. CC.0: Short circuit to earth</p>
NOTES	The fault changes from stored to present when the engine is running at idle speed.
	Special notes: For CC.1 and CO, the OBD and Level 1 warning lights illuminate. For CC.0, the Level 2 warning light illuminates.
	Measure the resistance of the injector between 0°C and 40°C.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
Check the connection and condition of the connector of the injection computer , component code 120 and of the cylinder 4 injector , component code 196 . If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.	
Measure the resistance of the cylinder 4 injector , component code 196 between connections 3FB and 3CU . If the resistance measured is not between $11 \Omega \leq X \leq 20 \Omega$ (K4M and D4D engine) or $9.2 \Omega \leq X \leq 17 \Omega$ (K7M engine): replace the cylinder 4 injector , component code 196 (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting).	
Run command AC008 Cylinder 4 injector and check the operation of the injector with a listening test.	
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CU between components 196 and 120 . If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
With the ignition on, check for + 12 V on connection 3FB of component 196 . If there is no + 12 V , check the continuity of the following connection: – 3FB between components 1047 and 196 . If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF038 PRESENT OR STORED	COMPUTER 1.DEF: Internal electronic fault.
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NOTES	Special notes: The OBD and Level 2 warning lights illuminate.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF047 PRESENT OR STORED	COMPUTER SUPPLY VOLTAGE 1.DEF: Permanent high signal. 2.DEF: Permanent low level.
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NOTES	Special notes: The OBD and Level 1 warning lights illuminate.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Move the wiring harness between the injection computer , component code 120 and the battery , component code 107 to see if the status changes (Present ↔ Stored). Look for any damage to the wiring harness and check the connection and condition of the battery , component code 107 and its connections. If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Start the engine and check the battery voltage using PR071 Computer supply voltage is $X \geq 9V$.
Stop the engine and check the vehicle charging circuit (see MR 388 Mechanical, 16A, Starting – Charging, Charging circuit: Check).
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF050 PRESENT OR STORED	BRAKE SWITCH CIRCUIT 1.DEF: Inconsistent signal.
NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present after the ignition has been switched on and the brake pedal has been depressed. The fault appears after a fault on one of the two brake switch contacts. See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
With the brake pedal released , check ET039 Brake pedal and ET799 Brake wire contact . ET039 must be Released and ET799 Inactive .	
Check the fitting and mechanical operation of the brake pedal (the pedal returns properly). If the check is incorrect, check the braking system.	
Remove the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting) and, without action on the pedal, press sufficiently on the brake pedal switch to seat it completely in its position. Lock it by turning it an eighth of a turn.	
With the brake pedal depressed , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 65A , the value must be $X > 1000 \text{ k}\Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). With the brake pedal released , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 5A , the value must be between $0 \Omega < X \leq 1 \Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting).	
Check the brake pedal switch connector, component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). If the connector is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring	
Check fuse F03 (10 A) and replace it if necessary.	
Checking the brake pedal switch: After the repair, perform these two checks. With the brake pedal released , check ET039 and ET799 . ET039 must be Released and ET799 must be Inactive . While depressing the brake pedal, check ET039 and ET799 . ET039 must be depressed and ET799 must be active . The two checks must be correct.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF059 PRESENT OR STORED	COMBUSTION MISFIRES ON CYLINDER 1 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Priority when dealing with a number of faults: – DF109 Low fuel level misfire , Check whether there are other cylinders with a combustion misfire fault reported by the diagnostic tool before starting the fault finding procedure below.
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – engine running at idling speed.
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit,
Check the condition of the cylinder 1 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 1.

After repair, check that the catalytic converter is not damaged by the misfire.
To do this, switch on the ignition, run the catalytic converter test **SC006 Run OBD test: Catalytic converter** and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal).
At the end, check the test results:
STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions
STATUS2: The component is in an average condition - sensor OK
STATUS3: The component is in a good condition - sensor OK
STATUS4: The component is in a poor condition - replace the catalytic converter (see **MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting**).

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF059 CONTINUED	
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2.DEF	NOTES	None.
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Check the ignition coil circuit (see MR 388, Mechanical, 17A, Ignition, Ignition: Specifications), Check the fuel supply circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the fuel supply pump circuit Check the condition of the cylinder 1 injector (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting), Check the compression of cylinder 1.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF060 PRESENT OR STORED	MISFIRING ON CYLINDER 2 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Priority when dealing with a number of faults: – DF109 Low fuel level misfire , Check whether there are other cylinders with a combustion misfire fault reported by the diagnostic tool before starting the fault finding procedure below.
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – engine running at idling speed.
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the cylinder 2 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 2.

After repair, check that the catalytic converter is not damaged by the misfire.
To do this, switch on the ignition, run the catalytic converter test **SC006 Run OBD test: Catalytic converter** and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal).
At the end, check the test results:
STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions
STATUS2: The component is in an average condition - sensor OK
STATUS3: The component is in a good condition - sensor OK
STATUS4: The component is in a poor condition - replace the catalytic converter (see **MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting**).

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF060 CONTINUED	
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2.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the cylinder 2 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 2.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF061 PRESENT OR STORED	MISFIRING ON CYLINDER 3 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Priority when dealing with a number of faults: – DF109 Low fuel level misfire , Check whether there are other cylinders with a combustion misfire fault reported by the diagnostic tool before starting the fault finding procedure below.
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – engine running at idling speed.
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the cylinder 3 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 3.

After repair, check that the catalytic converter is not damaged by the misfire.
To do this, switch on the ignition, run the catalytic converter test **SC006 Run OBD test: Catalytic converter** and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal).
At the end, check the test results:
STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions
STATUS2: The component is in an average condition - sensor OK
STATUS3: The component is in a good condition - sensor OK
STATUS4: The component is in a poor condition - replace the catalytic converter (see **MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting**).

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF061 CONTINUED	
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2.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the cylinder 3 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 3.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF062 PRESENT OR STORED	MISFIRING ON CYLINDER 4 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Priority when dealing with a number of faults: – DF109 Low fuel level misfire , Check whether there are other cylinders with a combustion misfire fault reported by the diagnostic tool before starting the fault finding procedure below.
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – engine running at idling speed.
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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<p>Check the ignition coil circuit (see MR 388, Mechanical, 17A, Ignition, Ignition: Specifications), Check the fuel supply circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the fuel supply pump circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the condition of the cylinder 4 injector (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting), Check the compression of cylinder 4.</p> <p>After repair, check that the catalytic converter is not damaged by the misfire. To do this, switch on the ignition, run the catalytic converter test SC006 Run OBD test: Catalytic converter and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal). At the end, check the test results:</p> <p>STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions STATUS2: The component is in an average condition - sensor OK STATUS3: The component is in a good condition - sensor OK STATUS4: The component is in a poor condition - replace the catalytic converter (see MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting).</p>
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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V42_V04_DF062 / V42_V06_DF062

DF062 CONTINUED	
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2.DEF	NOTES	None.
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Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the cylinder 4 injector (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the compression of cylinder 4.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF065 PRESENT OR STORED	COMBUSTION MISFIRES 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Priority when dealing with a number of faults: – DF109 Low fuel level misfire, – DF059 Combustion misfire on cylinder 1, – DF060 Combustion misfire on cylinder 2, – DF061 Combustion misfire on cylinder 3, – DF062 Combustion misfire on cylinder 4.
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – engine running at idling speed.
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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<p>Check the ignition coil circuit (see MR 388, Mechanical, 17A, Ignition, Ignition: Specifications), Check the fuel supply circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the fuel supply pump circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the condition of the cylinder injector (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting), Check the compression of the cylinder. After repair, check that the catalytic converter is not damaged by the misfire. To do this, switch on the ignition, run the catalytic converter test SC006 Run OBD test: Catalytic converter and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal). At the end, check the test results: STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions STATUS2: The component is in an average condition - sensor OK STATUS3: The component is in a good condition - sensor OK STATUS4: The component is in a poor condition - replace the catalytic converter (see MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting). </p>
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF065 CONTINUED	
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2.DEF	NOTES	None.
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Check the ignition coil circuit (see MR 388, Mechanical, 17A, Ignition, Ignition: Specifications), Check the fuel supply circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the fuel supply pump circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the condition of the cylinder injector (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting), Check the compression of the cylinder.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF078 PRESENT OR STORED	MOTORISED THROTTLE CONTROL CIRCUIT 1.DEF: Motorised throttle general control fault
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WARNING:

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present if: <ul style="list-style-type: none">– the engine speed varies,– the AC027 Motorised throttle command is activated.
	Special notes: OBD warning light and level 1 fault warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Check the **cleanliness and condition** of the injection computer connector, component code **120** and of the throttle valve connector, component code **1076**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3AJB** between components **120** and **1076**,
- **3AJC** between components **120** and **1076**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF079 PRESENT OR STORED	MOTORISED THROTTLE VALVE SERVO 1.DEF: Motorised throttle rest position programming error 2.DEF: Values outside permitted tolerance 3.DEF: Incorrect position of throttle valve in safe mode
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present : – switch on the powerlatch phase - switch off + after ignition feed and switch on the + after ignition feed again
	Special notes: OBD warning light and level 1 fault warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Check the **cleanliness and condition** of the injection computer connector, component code **120** and of the throttle valve connector, component code **1076**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

If the fault is still present, manually check that the throttle valve **rotates correctly**.

Repair if necessary (see **MR 388 or 451, Mechanical, 12A, Fuel mixture, Throttle valve: Cleaning**).

Accelerate a couple of times and check that the values of **PR538 Measured voltage gang 2** and **PR539 Measured voltage gang 1** vary according to acceleration.

If the fault is still present, disconnect the battery and the injection computer.

Check the **insulation, continuity and absence of interference resistance** of the following connections:

- **3AJB** between components **120** and **1076**,
- **3AJC** between components **120** and **1076**,
- **3MO** between components **120** and **1076**,
- **3MP** between components **120** and **1076**,
- **3MN** between components **120** and **1076**,
- **3MQ** between components **120** and **1076**.

If the connection or connections are faulty and if there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the throttle valve has been replaced, reinitialise the programming by running command **RZ031 Throttle stop programming**.

If the fault is still present, **contact Techline**.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
---------------------	--

DF081 PRESENT OR STORED	CANISTER BLEED SOLENOID VALVE CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
	Special notes: For CO and CC.1, the OBD warning light and level 1 fault warning light illuminate.

Check the cleanliness and condition of the connector of the injection computer, component code 120 and of the connector of the fuel vapour absorber bleed solenoid valve, component code 371 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3FB between components 371 and 1047 , – 3BB between components 371 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
With the ignition on, check for + 12 V on connection 3FB of component 371 . If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check the operation of the canister bleed solenoid valve using command AC017 Canister bleed solenoid valve .
Check the resistance of the fuel vapour absorber bleed solenoid valve . If the resistance of the fuel vapour absorber bleed solenoid valve is not between: 24 Ω < X < 30 Ω between 0°C and 40°C , replace the fuel vapour absorber bleed solenoid valve (see MR 388 or 451, Mechanical, 14A, Emission control, Fuel vapour absorber: Removal - Refitting).
If the fault is still present, contact Techline .

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF082 PRESENT OR STORED	UPSTREAM OXYGEN SENSOR HEATING CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster. Special notes: For CO and CC.1, the OBD warning light and level 1 fault warning light illuminate.
Check the condition of the fuse of the supply circuit for the upstream oxygen sensor, component code 887 . If the fuse is faulty, replace the fuse (see MR 388 or 451, Mechanical, 81C, Fuses, Fuses: List and location of components).	
Check the cleanliness and condition of the injection computer connector, component code 120 and of the upstream oxygen sensor connector, component code 887 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.	
With the ignition on, check for + 12 V on connection 3FB of component 887 . Check the insulation, continuity and the absence of interference resistance of the following connection: – 3FB between components 1047 and 887 , – 3GF between components 120 and 887 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring. Otherwise replace the wiring.	
If all the checks are correct, replace the upstream oxygen sensor, component code 887 (see MR 388 or 452, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting). If the fault is still present, contact the Techline.	

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF083 PRESENT OR STORED	DOWNSTREAM OXYGEN SENSOR HEATING CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
	Special notes: For CO and CC.1, the OBD warning light and level 1 fault warning light illuminate.

Check the **condition of the fuse** of the supply circuit for the downstream oxygen sensor, component code **242**. If the fuse is faulty, replace the fuse (see **MR 388 or 451, Mechanical, 81C, Fuses, Fuses: List and location of components**).

Check the **cleanliness** and **condition** of the injection computer connector, component code **120** and of the connector of the downstream oxygen sensor, component code **242**. If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

With the ignition on, check for **+ 12 V** on connection **3FB** of component **242**. Check the **insulation, continuity and the absence of interference resistance** of the following connection:
– **3FB** between components **1047** and **242**,
– **3GG** between components **120** and **242**. If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring. Otherwise replace the wiring.
If all the checks are correct, replace the downstream oxygen sensor, component code **242** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF085 PRESENT OR STORED	FUEL PUMP RELAY CONTROL CIRCUIT CO: Open circuit CC.0: Short circuit to earth CC.1: Short circuit to + 12 V
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present after the ignition is switched on or when running command AC015 Petrol pump relay . See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

CO CC.1	NOTES	Special notes: OBD warning light and level 2 fault warning light illuminated.
CC.0	NOTES	None.

Check the supply of the fuel supply pump relay control circuit with a test light by running command AC015 Fuel pump relay . Check the cleanliness and condition of the connector of the petrol pump relay, component code 236 (1047) and of the injection computer connector, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Check the insulation, continuity and absence of interference resistance on the following connection: – 3AC between components 236 (1047) and 120 , – 3NA between components 236 (1047) and 833 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. Check the supply of the power circuit at the fuel supply pump relay output with a test light by running command AC015 Fuel pump relay . If the supply at the relay output is not correct, replace the petrol pump relay, component code 1047 (see MR 388 or 451, Mechanical, 87G, Engine compartment connection unit, Engine compartment connection unit: List and location of components). If the fault is still present, contact the Techline.
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AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF088 PRESENT OR STORED	<u>PINKING SENSOR CIRCUIT</u>
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NOTES	Conditions for application to a stored fault: The fault is declared present during a warm engine road test at an engine speed of more than 3500 rpm .
	Special notes: – The Level 1 warning light is illuminated. – The wiring harness connecting the injection computer to the pinking sensor is shielded, therefore a short circuit at + 12V is unlikely.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

<p>Check the cleanliness and condition of the pinking sensor, component code 146 and its connector. If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring. Check the tightness of the pinking sensor (see MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection: List and location of components).</p> <p>Check the cleanliness and condition of the injection computer connections, component code 120. If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connector(s), otherwise, replace the wiring.</p> <p>Check the internal resistance of the pinking sensor, component code 146. The resistance value of the sensor must be: X > 10M Ω. If the value is not correct, replace the pinking sensor, component code 146 (see MR 388, Mechanical, 17B, Petrol injection, Petrol injection: List and location of components or MR 451, Mechanical, 17B, Petrol injection, Pinking sensor: Removal - Refitting).</p> <p>Check the continuity and insulation of the following connections: – 3S between components 120 and 146, – 3DQ between components 120 and 146, – TB1 of component 120.</p> <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the fault is still present, contact Techline.</p>

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF091 PRESENT OR STORED	VEHICLE SPEED SIGNAL 1.DEF: Signal outside upper limit 2.DEF: Signal outside lower limit
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present when the engine is running.
	2.DEF Impossible to change the fault to present status; deal with the stored fault.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Check the cleanliness and condition of the connector of the vehicle speed sensor, component code 250 and of the injection computer connector, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Check for + after ignition feed using a multimeter on connection 3FB of the vehicle speed sensor, component code 250 .
Check the continuity and insulation of the following connections: – 3FB between components 250 and 1047 , – 47F between components 120 and 250 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check the correct operation of the injection relay, component code 1047 (see MR 388 or 451, Mechanical, 87G, Engine compartment connection unit, Engine compartment connection unit: List and location of components). If the checks are correct and the fault is still present, replace the vehicle speed sensor, component code 250 .
If the fault is still present, contact Techline .

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF092 PRESENT OR STORED	UPSTREAM OXYGEN SENSOR CIRCUIT CC.1: Short circuit to + 12 V CO: Open circuit CC.0: Short circuit to earth ---
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NOTES	Deal with the following faults first: Only for CC.1 - DF082 Upstream oxygen sensor heating circuit.
	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present: – CC.0 - engine idling – CC.1 - engine idling for > 180 seconds – CO - engine idling – in the fourth case (---), it is impossible to change the fault to present status, deal with the stored fault
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

CO CC.1 CC.0	NOTES	Special notes: level 1 fault warning light illuminated.
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Check the cleanliness and condition of the connector of the upstream oxygen sensor, component code 887 and of the injection computer connector, component code 120. If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3GH between components 120 and 887 , – 3GK between components 120 and 887 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF092 CONTINUED	
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(--)	NOTES	Special notes: Level 1 fault warning light illuminated. Deal with the stored fault
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Check the resistance of the upstream oxygen sensor. The value must be between $7 \Omega < X < 10 \Omega$ and the sensor temperature must be $X < 40^\circ\text{C}$. If the value is not correct, replace the upstream oxygen sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal – Refitting**).

Check that the programming of the TDC* sensor is correct. (see **Replacement of components** section).

Run test **SC007 Run OBD test: O2 sensor** and start the engine (Only depress the brake pedal to authorise the starting of the engine).

At the end, check the test results:

STATUS1: Run the test again with the engine coolant temperature $X > 90^\circ\text{C}$.

STATUS2 or STATUS3: Sensor OK.

STATUS4: Replace the upstream oxygen sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal – Refitting**).

If the fault is still present, contact the Techline.

*TDC: Top Dead Centre

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF093 PRESENT OR STORED	DOWNSTREAM OXYGEN SENSOR CIRCUIT CC.1: Short circuit to + 12 V CO: Open circuit CC.0: Short circuit to earth
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NOTES	Deal with the following faults first: Only for CC.1 and CO - DF083 Downstream oxygen sensor heating circuit.
	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present: – with the engine idling for > 300 seconds
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

CC.1 CC.0	NOTES	Special notes: Level 1 fault warning light illuminated.
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Check the condition of the fuse of the supply circuit for the downstream oxygen sensor, component code 242 . If the fuse is faulty, check all the following steps and replace the fuse (see MR 388 or 451, Mechanical, 81C, Fuses, Fuses: List and location of components).
Check the cleanliness and condition of the injection computer connector, component code 120 and of the connector of the downstream oxygen sensor, component code 242 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3GJ between components 120 and 242 , – 3GL between components 120 and 242 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, replace the downstream oxygen sensor, component code 242 (see MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal – Refitting).
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF093 CONTINUED	
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CO	NOTES	None.
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Check the **condition of the fuse** of the supply circuit for the downstream oxygen sensor, component code **242**. If the fuse is faulty, check all the following steps and replace the fuse (see **MR 388 or 451, Mechanical, 81C, Fuses, Fuses: List and location of components**).

Read the stored speed within the context of the fault using **PR089 Vehicle speed**. If the value is **0**, drive the vehicle to reach a speed of **6 mph (10 km/h)** and check **PR089** again. If the value of this parameter is **0** whilst driving, apply the fault finding procedure for **DF091 Vehicle speed signal**, abandoning the steps described below. If **PR089** operates normally, follow the fault finding procedure for this fault.

Check the **cleanliness** and **condition** of the injection computer connector, component code **120** and of the connector of the downstream oxygen sensor, component code **242**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3GJ** between components **120** and **242**,
- **3GL** between components **120** and **242**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring. Otherwise replace the wiring.

If the fault is still present, replace the downstream oxygen sensor, component code **242** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF095 PRESENT OR STORED	THROTTLE POTENTIOMETER CIRCUIT GANG 1 1.DEF: Signal incoherent
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WARNING

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

NOTES	Special notes: OBD warning light and level 1 fault warning light illuminate, The throttle no longer operates.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

<p>Check the cleanliness of the throttle valve, component code 1076 and that the throttle rotates properly (no resistance point)</p> <p>Check the cleanliness and condition of the throttle valve connector.</p> <p>If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.</p> <p>Check the cleanliness and condition of the injection computer connector, component code 120.</p> <p>If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p> <p>Check the insulation, continuity and the absence of interference resistance on the following connections:</p> <ul style="list-style-type: none">– 3MO between components 120 and 1076,– 3MP between components 120 and 1076,– 3MN between components 120 and 1076. <p>If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the throttle valve has been replaced, reinitialise the programming by running command RZ031 Throttle stop programming.</p> <p>If the fault is still present, contact Techline.</p>

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF096 PRESENT OR STORED	THROTTLE POSITION POTENTIOMETER CIRCUIT GANG 2 1.DEF: Signal incoherent
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WARNING

Never drive the vehicle without having confirmed that no faults involving the throttle valve are present.

NOTES	Deal with the following faults first: DF011 Sensor supply voltage no. 1.
	Special notes: OBD warning light and level 1 fault warning light illuminate, The throttle no longer operates
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the cleanliness of the throttle valve, component code 1076 and that the throttle rotates properly (no resistance point).
Check the cleanliness and condition of the injection computer connector, component code 120 and of the throttle valve connector, component code 1076 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3MQ between components 120 and 1076 , – 3MN between components 120 and 1076 , – 3MO between components 120 and 1076 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the throttle valve has been replaced, reinitialise the programming by running command RZ031 Throttle stop programming .
If the fault is still present, contact Techline .

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF101
PRESENT
OR
STORED

MULTIPLEX ELECTRONIC STABILITY PROGRAM LINK

1.DEF: Invalid multiplex signals generated by computer

NOTES

None

Test the ABS computer (see **38C, Anti-lock braking system**).

AFTER REPAIR

Follow the instructions to confirm repair.
Deal with any other faults.
Clear the **stored** faults.

V42_V04_DF101 / V42_V06_DF101

DF102 PRESENT OR STORED	ALTERNATOR POWER SIGNAL AVAILABLE 1.DEF: Below minimum threshold.
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NOTES	Special notes: OBD warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the cleanliness and condition of the alternator connector, component code 103 and of the injection computer connector, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Check the insulation, continuity and the absence of interference resistance on the following connection. – 2K between components 103 and 120 . If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. If the fault is still present, contact the Techline.
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AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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V42_V04_DF102 / V42_V06_DF102

DF109 PRESENT OR STORED	LOW FUEL LEVEL MISFIRING 1.DEF: Polluting misfiring 2.DEF: Destructive misfiring
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present after starting the engine and under the following conditions: – engine running at idling speed
	Special note: Level 1 fault warning light illuminated.

1.DEF	NOTES	None.
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<p>Check the presence and conformity of the fuel in the tank (see Test 19 Checking the conformity of the fuel). Check the ignition coil circuit (see MR 388, Mechanical, 17A, Ignition, Ignition: Specifications), Check the fuel supply circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the fuel supply pump circuit (see MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram), Check the condition of the injectors (see MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting), Check the cylinder compressions. After repair, check that the catalytic converter is not damaged by the misfire. To do this, switch on the ignition, run the catalytic converter test SC006 Run OBD test: Catalytic converter and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal). At the end, check the test results: STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions STATUS2: The component is in an average condition - sensor OK STATUS3: The component is in a good condition - sensor OK STATUS4: The component is in a poor condition - replace the catalytic converter (see MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting).</p>
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AFTER REPAIR	Check that all faults have been dealt with. Do not clear the programming. To check that the system has been repaired correctly: – there must be no further electrical faults, – programming has been carried out, – warm engine (minimum 75°C), – running at idle speed with all electrical consumers drawing power for 15 minutes. If the fault reappears, continue the fault finding procedure.
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V42_V04_DF109 / V42_V06_DF109

DF109 CONTINUED	
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2.DEF	NOTES	None.
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Check the presence and conformity of the fuel in the tank (see **Test 19 Checking the conformity of the fuel**).
Check the ignition coil circuit (see **MR 388, Mechanical, 17A, Ignition, Ignition: Specifications**),
Check the fuel supply circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the fuel supply pump circuit (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel circuit: Operating diagram**),
Check the condition of the injectors (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
Check the cylinder compressions.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF120 PRESENT OR STORED	ENGINE SPEED SENSOR SIGNAL 1.DEF: Inconsistent signal. 3.DEF: Interference. 4.DEF: Incorrect number of teeth.
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present after starting the engine and under the following conditions: – engine running at idling speed
	Special note: OBD warning light and level 1 fault warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the connection and condition of the connector of the crankshaft position sensor , component code 149 and of the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Measure the resistance of the crankshaft position sensor component code 149 between connections 3BL and 3BG on the injection computer connector, component code 120 . If the resistance of the crankshaft position sensor is not between $175 \Omega \leq X \leq 295 \Omega$ (between 0°C and 40°C), replace the crankshaft position sensor (see MR 388 or 451, Mechanical, 17B, Petrol injection, Crankshaft position sensor: Removal - Refitting).
Check the insulation and continuity of the following connections: – 3BG between components 149 and 120 , – 3BL between components 149 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check that the 58 teeth of the flywheel target are not damaged or broken.
Check that the target is securely mounted on the flywheel (see MR 388 or 451, Mechanical, 10A, Engine and cylinder block assembly, Flywheel: Removal - Refitting): check the tightening torque and that there is no angular play or movement in relation to the target shaft
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF342 PRESENT OR STORED	MALFUNCTION INDICATOR LIGHT CIRCUIT 1.DEF: Voltage too low. 2.DEF: Voltage too high.
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NOTES	Deal with the other faults first .
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

<p>Test the OBD warning light using a test warning light when switching on the ignition. If the test warning light illuminates for a few seconds, replace the faulty warning light (see MR 388 or 451, Mechanical, 83A, Instrument panel, Instrument panel, Removal - Refitting).</p> <p>Check the continuity, insulation, and the absence of interference resistance on the following connection: – 137C between components 120 and 247. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the fault is still present, contact the Techline.</p>
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF361 PRESENT OR STORED	IGNITION COIL 1 - 4 CIRCUIT CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present after starting the engine and under the following conditions: – engine running at idling speed
	Special note: For CC.1 and CO, the OBD warning light and level 1 fault warning light illuminate, For CC.0, the OBD warning light and level 2 fault warning light illuminate.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
	The D4D and K7M engines are equipped with a quadruple ignition coil module. The K4M engine is equipped with 4 "pencil" type coils.

D4D and K7M engines

Check the cleanliness and condition of the injection computer connector, component code 120 and of the coil connector, component code 778 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CV between components 120 and 778 , – 3CW between components 120 and 778 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
With the ignition on, check the supply of the ignition coil, component code 778 using a test light on connection 3NA .
Check the insulation, continuity and the absence of interference resistance on the following connection: – 3NA between components 1047 and 778 . If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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V42_V04_DF361 / V42_V06_DF361

DF361 CONTINUED	
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K4M engine

Check the cleanliness and condition of the pencil coil no.1 connector, component code **1077**, of the pencil coil no.4 connector, component code **1080** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3CZ** between components **120** and **1077**,
- **3CV** between components **1077** and **1080**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring. Otherwise replace the wiring.

With the ignition on, check the supply of the pencil ignition coils, component code **1077** and **1080** using a test light on connection **3NA** of the injection relay, component code **1047**.

Check the **insulation, continuity and the absence of interference resistance** on the following connection:

- **3NA** between components **1080** and **1047**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF362 PRESENT OR STORED	IGNITION COIL 2-3 CIRCUIT CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present after starting the engine and under the following conditions: – engine running at idling speed
	Special note: For CC.1 and CO, the OBD warning light and level 1 fault warning light illuminate. For CC.0, the OBD warning light and level 2 fault warning light illuminate.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
	The D4D and K7M engines are equipped with a quadruple ignition coil module. The K4M engine is equipped with 4 "pencil" type coils.

D4D and K7M engines

Check the cleanliness and condition of the injection computer connector, component code 120 and of the coil connector, component code 778 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3CV between components 120 and 778 , – 3CW between components 120 and 778 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
With the ignition on, check the supply of the ignition coil, component code 778 using a test light on connection 3NA .
Check the insulation, continuity and the absence of interference resistance on the following connection: – 3NA between components 1047 and 778 . If the connection is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF362 CONTINUED	
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K4M engine

Check the cleanliness and condition of the injection computer connector, component code **120**, of the pencil coil no.2 connector, component code **1078** and of the pencil coil no.3 connector, component code **1079**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3CP** between components **120** and **1078**,
- **3CW** between components **1078** and **1079**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring. Otherwise replace the wiring.

With the ignition on, check the supply of the ignition coils, component code **1078** and **1079** using a test light on connection **3NA** of the injection relay, component code **1047**.

Check the **insulation, continuity and the absence of interference resistance** on the following connection:

- **3NA** between components **1079** and **1047**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF394 PRESENT OR STORED	CATALYTIC CONVERTER OPERATING FAULT 1.DEF: Component in bad condition
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NOTES	Priority when dealing with a number of faults: Deal with the other faults first. There must be no other injection system faults, either present or stored . – DF081 - Canister bleed solenoid valve circuit – DF120 - Engine speed sensor signal – DF361 - Ignition coil 1-4 circuit – DF362 - Ignition coil 2-3 circuit – DF026 - Cylinder 1 injector control circuit – DF027 - Cylinder 2 injector control circuit – DF028 - Cylinder 3 injector control circuit – DF029 - Cylinder 4 injector control circuit – DF092 - Upstream oxygen sensor circuit – DF082 - Upstream oxygen sensor heating circuit – DF093 - Downstream oxygen sensor circuit – DF002 - Air temperature sensor circuit – DF001 - Coolant temperature sensor circuit
	Conditions for applying the fault finding procedure to a stored fault: The fault is not declared present , deal with the stored fault.
	Special note: Level 1 fault warning light illuminated.

Check the downstream oxygen sensor (see MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting). Check the programming of the TDC* sensor (see Section: Replacement of components)
Run the catalytic converter test SC006 Run OBD test: Catalytic converter and start the engine (only depress the brake pedal to authorise the starting of the engine, do not touch the accelerator pedal or clutch pedal). At the end, check the test results: STATUS1: Fault finding was not performed/impossible to obtain the necessary conditions STATUS2: The component is in an average condition - sensor OK STATUS3: The component is in a good condition - sensor OK STATUS4: The component is in a poor condition - replace the catalytic converter (see MR 388 or 451, Mechanical, 19B, Exhaust, Catalytic converter: Removal - Refitting).
If the fault is still present, contact the Techline.

*TDC: Top Dead Centre

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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V42_V04_DF394 / V42_V06_DF394

DF398 PRESENT OR STORED	FUEL CIRCUIT OPERATING FAULT 1.DEF: Component in poor condition.
NOTES	Priority when dealing with a number of faults: Deal with the other faults first. – DF085 - Fuel pump relay control circuit
	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present with the engine running at an engine speed of 2500 rpm for 10 seconds .
	Special note: OBD warning light illuminated.

Check the value of parameter PR139 Operating richness adaptive.

If the value of **PR139 < 1** then:

Check the sealing of the fuel supply system from the fuel pump to the injector rail:

- The fuel tank (see **MR 388 or 451, Mechanical, 19C, Tank, Fuel tank: Removal - Refitting**),
- The connection between the fuel pump and the fuel filter (see **MR 388 Mechanical, 19C, Tank, Fuel supply pipe: Removal – Refitting or MR 451 Mechanical, 19C, Tank, Fuel tank: Removal - Refitting**),
- The connection between the fuel filter and the regulator (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel filter: Removal - Refitting**),
- The pressure regulator ducts (see **MR 388 Mechanical, 19C, Tank, Fuel supply pipe: Removal – Refitting or MR 451 Mechanical, 19C, Tank, Fuel tank: Removal - Refitting**),
- The connection between the regulator and the injector rail (see **MR 388 Mechanical, 19C, Tank, Fuel supply pipe: Removal - Refitting or MR 451 Mechanical, 19C, Tank, Fuel tank: Removal - Refitting**),
- The fuel ducts between the injector rail and the injectors (see **MR 388 Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal - Refitting or MR 451 Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal - Refitting**),
- Check the fuel filter (to detect possible clogging) (see **MR 388 or 451, Mechanical, 13A, Fuel supply, Fuel filter: Removal - Refitting**),
- Check the pressure regulator,
- Check the fuel pump flow (see **MR 388 Mechanical, 13A, Fuel supply, Fuel flow: Removal – Refitting or MR 451 Mechanical, 13A, Fuel supply, Fuel flow: Check**),
- Check the injector flow (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting or MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**).

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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**DF398
CONTINUED**

If the value of **PR139 > 1** then:

- Check the pressure regulator,
- Check the connections on the inlet manifold (see **MR 388 or 451, Mechanical, 12A, Fuel mixture, Air inlet: Description**),
- Check for possible petrol leaks (see **ALP4 Fuel leak**),
- Check for possible air leaks,
- Check the injector sealing (see **MR 388, Mechanical, 13A, Fuel supply, Injector rail - Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**),
- Check the seal between the inlet manifold and the solenoid valve unit.

If the fault is still present, contact the Techline.

AFTER REPAIR

Follow the instructions to confirm repair.
Deal with any other faults.
Clear the **stored** faults.

DF409 PRESENT OR STORED	FUEL LEVEL SENSOR CIRCUIT 1.DEF: Voltage too low 2.DEF: Voltage too high
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NOTES	Special notes: OBD warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the cleanliness and condition of the injection computer connector, component code 120 and of the instrument panel connector, component code 247 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 47H between components 120 and 247 , – 3NX between components 120 and 247 , – 137C between components 120 and 247 , – 31A between components 120 and 247 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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DF457 PRESENT OR STORED	FLYWHEEL TARGET 1.DEF: Component in bad condition
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is declared present with the engine running, engine speed > 3500 rpm .
	Special notes: OBD warning light illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the cleanliness and condition of the injection computer connector, component code 120 and of the TDC* sensor connector, component code 149 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Measure the resistance of the TDC* sensor component code 149 between connections 3BL and 3BG on the injection computer connector, component code 120 . If the resistance of the crankshaft position sensor is not between $175 \Omega \leq X \leq 295 \Omega$ (between 0°C and 40°C), replace the crankshaft position sensor (see MR 388 or 451, Mechanical, 17B, Petrol injection, Crankshaft position sensor: Removal - Refitting).
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3BG between components 120 and 149 , – 3BL between components 120 and 149 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Check the cleanliness and condition of the flywheel (see MR 388 or 451, Mechanical, 10A, Engine and cylinder block assembly, Flywheel: Removal - Refitting).
If the fault is still present, contact the Techline.

*TDC: Top Dead Centre

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other faults. Clear the stored faults.
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V42_V04_DF457 / V42_V06_DF457

DF532 PRESENT OR STORED	ALTERNATOR CHARGE SIGNAL 1.DEF: Voltage too low 2.DEF: Voltage too high
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is present with the engine idling.
	Special notes: The OBD warning light is lit.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

<p>Check the cleanliness and condition of the alternator connector, component code 103 and of the injection computer connector, component code 120. If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.</p> <p>Check the insulation, continuity and the absence of interference resistance on the following connection. – 2K between components 103 and 120. If the connection is faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p> <p>If the connection is correct, replace the alternator, component code 103 (see MR 388 or 451, Mechanical, 16A, Starting - Charging, Alternator: Removal - Refitting).</p> <p>If the fault is still present, contact the Techline.</p>
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF556 PRESENT OR STORED	PEDAL/THROTTLE POSITION CONSISTENCY 1.DEF: Signal incoherent 2.DEF: Micro-break detected
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NOTES	The inlet throttle valve no longer operates.
	Special notes: For 1.DEF, the OBD and level 1 fault warning lights are illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the cleanliness and condition of the injection computer connector, component code 120 and of the damper valve connector, component code 1076 (see MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting). If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Check the insulation, continuity and the absence of interference resistance on the following connections: – 3AJB between components 1076 and 120 , – 3AJC between components 1076 and 120 . If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace the wiring. If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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V42_V04_DF556 / V42_V06_DF556

DF631 PRESENT OR STORED	BRAKE LIGHT SWITCH SIGNAL 1.DEF: Inconsistent signal.
NOTES	Conditions for application to a stored fault: The fault is declared present when the engine is idling. The fault is declared present: – After depressing the pedal at least 10 times . See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
With the brake pedal released, check ET039 Brake pedal and ET799 Brake wire contact . Check that ET039 is Released and ET799 is Inactive .	
Check the fitting and mechanical operation of the brake pedal (the pedal returns properly). If the check is incorrect, check the braking system.	
Remove the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting) and, without action on the pedal, press sufficiently on the brake pedal switch to seat it completely in its position. Lock it by turning it a quarter of a turn anti-clockwise. The fault should change from present to stored .	
While depressing the brake pedal to the end of travel, check ET039 and ET799 . ET039 must be depressed and ET799 must be active . If the statuses are correct, contact the Techline.	
With the brake pedal depressed , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 65A , the value must be $X > 10 \text{ M}\Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). – With the brake pedal released , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 5A , the value must be between $0 \Omega < X \leq 1 \Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting).	
Check the brake pedal switch connector, component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). If the connector is faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring	
Check fuse F03 (10 A) and replace it if necessary.	
Check the insulation, continuity and the absence of interference resistance on the following connections: – AP1 between components 160 and 1016 , – 5A between components 160 and 120 , – 65A between components 160 and 120 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF648
PRESENT
OR
STORED

COMPUTER

NOTES

Special notes:
The OBD and Level 2 fault warning lights are illuminated.

Contact the Techline.

AFTER REPAIR

Deal with any faults displayed by the **diagnostic tool**.
Clear the computer fault memory.
Carry out a road test followed by another check with the **diagnostic tool**.

DF721 PRESENT OR STORED	ENGINE OVERHEATING 1.DEF: Operating temperature too high.
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NOTES	Deal with the stored fault.
	Special notes: After this fault appears: The level 1 warning light is illuminated. The overheating warning light is illuminated.

Check the engine cooling system (see MR 388 or 451, Mechanical, 19A, Cooling, Engine cooling system: Check).
Check the coolant temperature sensor by applying TEST 15 Checking the coolant temperature sensor .
Check the correct operation of the engine cooling fans (see Test 16 Checking the fan relay).
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF884 PRESENT OR STORED	ADDITIONAL FUEL CIRCUIT PUMP RELAY CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	Conditions for application to a stored fault: The fault is declared present after running command AC224 Additional fuel circuit pump relay .
	See the Wiring Diagrams Technical Note for Logan, Sandero .

Check the supply of the control circuit of the additional fuel supply pump relay with a test light by running command AC224 Additional petrol circuit pump relay . Check the cleanliness and condition of the connector of the additional petrol pump relay, component code 1639 and of the injection computer connector, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Check the insulation, continuity and absence of interference resistance on the following connection: – 3ACK between components 1639 and 120 , – 3FB between components 1639 and 1047 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring. Otherwise replace the wiring. Check the supply of the power circuit of the additional fuel supply pump relay with a test light by running command AC224 Additional petrol circuit pump relay . If the check is correct, replace the pump, component code 1639 (see MR 388, Mechanical, 19C, Tank, Additional fuel system petrol pump: Removal - Refitting). If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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V42_V04_DF884 / V42_V06_DF884

DF887 PRESENT OR STORED	BRAKE - ACCELERATOR PEDAL POSITION 1.DEF: Jammed accelerator pedal detected. 2.DEF: Jammed accelerator pedal detected. 3.DEF: Inconsistency between pedal gang 1 and gang 2. 4. DEF: Fault on pedal potentiometer gangs 1 and 2.	
NOTES	Conditions for application to a stored fault: The fault is declared present after the ignition is switched on or with the engine running. Deal with the stored faults (1.DEF, 2.DEF only).	
1.DEF 2.DEF	NOTES	None.
Check that the accelerator pedal is not jammed and that there is nothing impeding its operation (floor carpet, etc.).		
Run TEST 9 Brake pedal switch check .		
Run TEST 8 Accelerator pedal potentiometer check .		
If the fault is still present, contact the Techline.		
3.DEF	NOTES	None.
If fault 3.DEF: Inconsistency between pedal gang 1 and gang 2 is the only fault and is present , replace the accelerator pedal (see MR 388 or 451, Mechanical, 37A, Mechanical component control, Accelerator pedal: Removal – Refitting).		
If the fault is still present, contact the Techline.		
4.DEF	NOTES	None.
Run TEST 8 Accelerator pedal potentiometer check .		
If the fault is still present, contact the Techline.		
AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .	

DF894 PRESENT OR STORED	ADDITIONAL FUEL CIRCUIT SOLENOID VALVE CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero.
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Check the connection and condition of the connector of the additional fuel circuit solenoid valve, component code 1640 and the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
--

Check the continuity, insulation, and absence of interference resistance on the following connections: – 3ACM between components 1640 and 120 , – 3FB between components 1640 and 1047 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring. Otherwise replace the wiring.

Check the supply of the solenoid valve using a test light, by running command AC217 Additional fuel circuit solenoid valve .

Check the internal resistance of the solenoid valve, component code 1640 on the computer connector, its value must be between: $24\Omega < X \leq 30\Omega$. If the resistance is incorrect, replace the solenoid valve.
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If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF974 PRESENT OR STORED	PEDAL POTENTIOMETER CIRCUIT GANG 1 1.DEF: Battery voltage too high. 2.DEF: Battery voltage too low.
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NOTES	Fault priorities: Deal with the following fault as a priority: DF011 Sensor voltage supply no. 1
	Special notes: After this fault appears: The OBD and level 1 warning lights are illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the connection and condition of the connector of the accelerator pedal sensor, gang 1 , component code 921 and of the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Run TEST 8 Accelerator pedal potentiometer check .
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF975 PRESENT OR STORED	PEDAL POTENTIOMETER CIRCUIT GANG 2 1.DEF: Battery voltage too high. 2.DEF: Battery voltage too low.
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NOTES	Special notes: After this fault appears: The OBD and level 1 warning lights are illuminated.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the connection and condition of the connector of the accelerator pedal sensor, gang 2 , component code 921 and of the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring. Run TEST 8 Accelerator pedal potentiometer check . If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF992 PRESENT OR STORED	ADDITIONAL HEATER 1 RELAY CIRCUIT CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
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Check the cleanliness and condition of the additional heater 1 relay, component code 1067 and the connections of the injection computer, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
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Check the insulation, continuity and absence of interference resistance on the following connection: – 38JU between components 1067 and 120 , – 3FB between components 1067 and 1047 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

Check that the additional heater relay operates correctly by running command AC250 Heating resistor 1 relay and check that there are no more faults on the relay. If the check is not correct, replace the additional heater relay, component code 1067 (see MR 388 or 451, Mechanical, 61A, Heating system, Heating resistor relay: Removal - Refitting).
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If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF993 PRESENT OR STORED	ADDITIONAL HEATER 2 RELAY CIRCUIT CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
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Check the cleanliness and condition of the additional heater 2 relay, component code 1068 and the connections of the injection computer, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
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Check the insulation, continuity and absence of interference resistance on the following connection: – 38JV between components 1068 and 120 , – 3FB between components 1068 and 1047 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

Check that the additional heater relay operates correctly by running command AC251 Heating resistor 2 relay and check that there are no more faults on the relay. If the check is not correct, replace the additional heater relay, component code 1068 (see MR 388 or 451, Mechanical, 61A, Heating system, Heating resistor relay: Removal - Refitting).
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If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF994 PRESENT OR STORED	ADDITIONAL HEATER 3 RELAY CIRCUIT CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
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Check the cleanliness and condition of the additional heater 3 relay, component code 1069 and the connections of the injection computer, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring.
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Check the insulation, continuity and absence of interference resistance on the following connection: – 38JW between components 1069 and 120 , – 3FB between components 1069 and 1047 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

Check that the additional heater relay operates correctly by running command AC252 Heating resistor 3 relay and check that there are no more faults on the relay. If the check is not correct, replace the additional heater relay, component code 1069 (see MR 388 or 451, Mechanical, 61A, Heating system, Heating resistor relay: Removal - Refitting).
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If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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V42_V04_DF994 / V42_V06_DF994

DF1015 PRESENT OR STORED	BRAKE SWITCH SIGNAL CONSISTENCY 1.DEF: Value outside permitted tolerance values 2.DEF: Inconsistent signal.
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NOTES	Fault priorities Deal with the following faults first: DF050 Brake switch circuit DF631 Brake light switch signal
	Conditions for application to a stored fault: The fault is declared present : – For 1.DEF engine at idle speed . – For 2.DEF , impossible to see the present fault, deal with it as a stored fault.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

With the brake pedal released , check ET039 Brake pedal and ET799 Brake wire contact . If ET039 is Released and ET799 is Inactive . Check the fitting and mechanical operation of the brake pedal (the pedal returns properly). If the check is incorrect, check the braking system. Remove the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting) and, without action on the pedal, press sufficiently on the brake pedal switch to seat it completely in its position. Lock it by turning it an eighth of a turn. The fault should change from present to stored . – With the brake pedal depressed , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 65A , the value must be $X > 10 \text{ M}\Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). – With the brake pedal released , measure the resistance of the brake pedal switch , component code 160 between connections AP1 and 5A , the value must be between $0 \Omega < X \leq 1 \Omega$. If the resistance is not correct, replace the brake pedal switch , component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). Check the brake pedal switch connector, component code 160 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting). If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring. Check fuse F03 (10 A) and replace it if necessary. If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1017 PRESENT OR STORED	COMPUTER 1.DEF: Internal electronic fault. 2.DEF: Internal electronic fault.
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NOTES	Conditions for application to a stored fault: The fault is declared present : – For an engine speed > 1500 rpm and coolant temperature > 70°C
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1.DEF	NOTES	None.
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Do not replace the injection computer if the fault is stored . In the event of a customer complaint relating to engine jolts, contact Techline.

2.DEF	NOTES	None.
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If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1058 PRESENT OR STORED	INLET PRESSURE CONSISTENCY 1.DEF: Abnormal voltage 2.DEF: Abnormal pressure
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NOTES	Priority when dealing with a number of faults: DF079 Motorised throttle valve servo
	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – For 2.DEF engine running at idle speed.
	Special note: For 2.DEF , the OBD warning light and level 1 fault warning light illuminate, For 1.DEF , the OBD warning light illuminates.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.

Check the fitting and sealing of the inlet air pressure sensor, component code 147 (condition of the seals) and look for possible leaks on the inlet air pipe.
Check the connector of the inlet air pressure sensor, component code 147 . If the connector is faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the supply voltage of the sensor on connections 3AJR and 3AJP .
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3AJP between components 120 and 147 , – 3AJR between components 120 and 147 , – 3AJQ between components 120 and 147 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.
Replace the inlet air pressure sensor, component code 147 and check that the fault is no longer present (see MR 388 or 451, Mechanical, 12A, Fuel mixture, Air inlet: Description).
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1063
PRESENT
OR
STORED

MULTIPLEX ELECTRONIC STABILITY PROGRAM LINK

1.DEF: Invalid multiplex signals generated by computer

NOTES

None.

Test the ABS computer (see **38C, Anti-lock braking system**).

AFTER REPAIR

Deal with any faults displayed by the **diagnostic tool**.
Clear the computer fault memory.
Carry out a road test followed by another check with the **diagnostic tool**.

DF1068 PRESENT OR STORED	REFRIGER.* PRESSURE SENSOR VOLTAGE 1.DEF: Voltage too low. 2.DEF: Voltage too high.
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
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Check the connection and condition of the **refrigerant pressure sensor** connector, component code **1202** and of the **injection computer** connector, component code **120**.

If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

With the ignition on, check for the presence of **+ 5 V** on connection **38Y** and an **earth** on connection **38U** of the **refrigerant fluid pressure sensor**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **38Y** between components **1202** and **120**,
- **38X** between components **1202** and **120**,
- **38U** between components **1202** and **120**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, replace the **refrigerant pressure sensor**, component code **1202** (see **MR 388 or 451, Mechanical, 62A, Air conditioning, Pressure sensor: Removal – Refitting, MR 388 or 451, Mechanical, 62A, Air conditioning: Precautions for repair, MR 388 or 451, Mechanical, 62A, Air conditioning: Parts and consumables for the repair**).

If the fault is still present, contact the Techline.

REFRIGER.*: REFRIGERANT.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1072 PRESENT OR STORED	AIR CONDITIONING COMPRESSOR RELAY CONTROL CC.0: Short circuit to earth CC.1: Short circuit to + 12 V CO: Open circuit
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
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Check the connection and condition of the air conditioning compressor control relay connector, component code 474 and the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring. Check the insulation, continuity and the absence of interference resistance on the following connections: – 38K between components 474 and 120 , – 3FB between components 1047 and 474 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. Run command AC180 Air conditioning compressor relay control in order to check that the relay operates correctly. If the fault is still present, contact the Techline.
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1074 PRESENT OR STORED	MOTORISED THROTTLE POSITION INCONSISTENT 1.DEF: Inconsistency between throttle valve position and control. 2.DEF: Inconsistent signal.
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NOTES	Conditions for applying the fault finding procedure to a stored fault: The fault is considered present under the following conditions: – For 1.DEF engine running at idle speed.
	Special note: For 1.DEF, the OBD warning light illuminates, For 2.DEF, the OBD warning light and level 2 fault warning light illuminate.
	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .

Check the connection and condition of the motorised throttle valve connector, component code 1076 and the injection computer connector, component code 120 . If the connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector, otherwise replace the wiring.
Check the insulation, continuity and the absence of interference resistance on the following connections: – 3AJB between components 1076 and 120 , – 3AJC between components 1076 and 120 , – 3MP between components 1076 and 120 , – 3MQ between components 1076 and 120 , – 3MO between components 1076 and 120 .
If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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DF1355
PRESENT
OR
STORED

MULTIPLEX TORQUE REGULATOR CONNECTION

- 1.DEF: Inconsistent signal.
- 2.DEF: Invalid multiplex signals generated by computer.

NOTES

None.

Perform fault finding on the electromagnetic torque management computer.

AFTER REPAIR

Deal with any faults displayed by the **diagnostic tool**.
Clear the computer fault memory.
Carry out a road test followed by another check with the **diagnostic tool**.

The global **conformity check** for the functions and sub-functions of this system is no longer interpreted in the conformity check. Instead, all information available in the functions and sub-functions can be found in the following chapters:

For **STATUSES**, refer to **INTERPRETATION OF STATUSES**.

For **PARAMETERS**, refer to **INTERPRETATION OF PARAMETERS**.

For **COMMANDS**, refer to **INTERPRETATION OF COMMANDS**.

Tool status	Diagnostic tool title
ET001	Computer + After ignition
ET038	Engine
ET039	Brake pedal
ET041	Gearbox ratio
ET047	Fuel pump control circuit
ET051	Throttle stop programming
ET089	Flywheel target programming
ET148	OBD warning light activation request
ET321	Air conditioning compressor
ET405	Clutch pedal switch
ET434	Low fuel level
ET673	Jammed accelerator pedal detected
ET717	Target gearbox ratio
ET734	Heating resistor 1 relay control
ET735	Heating resistor 2 relay control
ET736	Heating resistor 3 relay control
ET759	Braking multiplex signal detected
ET760	First starting
ET775	Camshaft TDC* synchronisation
ET798	Clutch wire contact connection
ET799	Brake wire contact
ET813	Low speed fan assembly request by injection
ET814	High speed fan assembly request by injection
ET819	Low speed fan assembly final request
ET820	High speed fan assembly final request
ET836	TDC sensor signal
ET837	Crankshaft synchronisation
ET831	Injection protection

TDC*: Top Dead Centre

GMV**: Fan assembly

ET001	<u>COMPUTER + AFTER IGNITION FEED</u>
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STATUS DEFINITION	PRESENT: This status indicates that the + after ignition feed is active. ABSENT: This status indicates that the + after ignition is not active.
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"PRESENT"	NOTES	None.
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With the ignition on and engine running warm at idle speed, + after ignition feed is activated. In the event of a fault, apply the interpretation of DF047 Computer supply voltage .
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AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer fault memory. Carry out a road test followed by another check with the diagnostic tool .
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ET038	<u>ENGINE</u>
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STATUS DEFINITION	<p>STOPPED: This status indicates that the engine ignition is on without the starter engaged.</p> <p>STALLED: This status indicates that the engine has stalled.</p> <p>RUNNING: This status indicates that the engine has started.</p> <p>STARTING: This status indicates that the engine is in starting phase.</p>
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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V42_V04_ET038 / V42_V06_ET038

ET041	<u>GEAR</u>
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STATUS DEFINITION	<p>REVERSE: This status indicates the gear engaged.</p> <p>DECLUTCHED: This status indicates the gear engaged.</p> <p>1: This status indicates the gear engaged.</p> <p>2: This status indicates the gear engaged.</p> <p>3: This status indicates the gear engaged.</p> <p>4: This status indicates the gear engaged</p> <p>5: This status indicates the gear engaged.</p>
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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V42_V04_ET041 / V42_V06_ET041

ET047	<u>FUEL PUMP CONTROL CIRCUIT</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the fuel pump is active. INACTIVE: This status indicates that the fuel pump is inactive.
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Conformity check: Engine stopped, ignition on or engine running.	
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ACTIVE	Status ET047 is ACTIVE when starting the engine. In the event of a fault apply the interpretation of DF085 Fuel pump relay circuit .
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INACTIVE	Status ET047 is INACTIVE when the engine is stopped and the ignition off.
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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V42_V04_ET047 / V42_V06_ET047

ET051	<u>THROTTLE STOP PROGRAMMING</u>
STATUS DEFINITION	COMPLETED: This status indicates that the throttle stops have been programmed NOT COMPLETED: This status indicates that the throttle stops have not been programmed.
Conformity check: Engine stopped, ignition on or engine running.	
COMPLETED	This means that the throttle stops have been programmed. Even though this programming is automatic, take particular care when performing the first motorised throttle stop programming operation. This can be carried out on several occasions: – when a computer is switched on for the first time, – at the end of computer programming (see Replacement of components) The air temperature must be above 0°C during programming, then, at the end of programming, switch off the ignition and wait 30 seconds for the end of Power Latch so that the computer can store the programmed stops.
NOT COMPLETED	This means that the throttle stops have not been programmed.
AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .

ET089	<u>PROGRAMMING THE ENGINE FLYWHEEL TARGET</u>
STATUS DEFINITION	COMPLETED: This status indicates that the throttle stops have been programmed NOT COMPLETED: This status indicates that the throttle stops have not been programmed.
Conformity check: Engine stopped, ignition on or engine running.	
COMPLETED	This means that the engine flywheel target programming has been completed. In the event of a fault, program the engine flywheel target (see Replacement of components). In the event of a fault, apply the interpretation of DF457 Flywheel target .
NOT COMPLETED	This means that the engine flywheel target programming has not been completed.
AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .

ET148	<u>OBD WARNING LIGHT ACTIVATION REQUEST</u>
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STATUS DEFINITION	YES: This status indicates that the warning light is lit continuously. NO: This status indicates that the warning light is off. FLASHING: This status indicates that the warning light flashes. SELF TEST: This status indicates that the warning light is performing a self test.
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NOTES	Special notes: In the event of normal operation, this warning light must remain off (NO).
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Conformity check: Engine stopped, ignition on or engine running.	
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"YES"	If the status is inconsistent, consult the interpretation of fault DF342 Malfunction indicator light circuit .
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET321	<u>AIR CONDITIONING COMPRESSOR</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the air conditioning compressor is active. INACTIVE: This status indicates that the air conditioning compressor is inactive
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NOTES	Special notes: Only perform these tests if the status does not correspond with the system programming functions.
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Conformity check: Engine stopped, ignition on or engine running.	
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ACTIVE	To check the operation of the air conditioning, run command AC180 Air conditioning compressor relay control . In the event of a fault, apply the interpretation of DF1072 Air conditioning compressor control .
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET405	<u>CLUTCH PEDAL SWITCH</u>
STATUS DEFINITION	ACTIVE: This status indicates that the clutch pedal is depressed. INACTIVE: This status indicates that the clutch pedal is released.
NOTES	Special notes: Apply the checks only if statuses ACTIVE and INACTIVE are inconsistent with the pedal position. See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.	
INACTIVE	<p>Check the condition and fitting of the clutch pedal position sensor, component code 675 (see MR 388, Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Clutch pedal: Removal - Refitting).</p> <p>Remove the clutch pedal position sensor, component code 675 (see MR 388, Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Clutch pedal: Removal - Refitting).</p> <p>Check the insulation between connections MAM and 86D of component 675 with the switch in the rest position.</p> <ul style="list-style-type: none">– Repeat this operation with the switch pressed, and check the continuity and the absence of interference resistance between the two connections. <p>If these 2 checks are not correct, replace the clutch pedal position sensor, component code 675 (see MR 388, Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Clutch pedal: Removal - Refitting).</p> <p>Then check the continuity and absence of interference resistance of the following connection:</p> <ul style="list-style-type: none">– 86D between components 120 and 675. <p>Check that the earth is in order on connection MAM of component 675.</p> <p>If the connection or connections are faulty and if there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it.</p>
AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .

ET405 CONTINUED	
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ACTIVE	<p>Check the condition and fitting of the clutch pedal position sensor.</p> <p>Remove the clutch pedal position sensor, component code 675 (see MR 388, Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Clutch pedal: Removal - Refitting), check the insulation between connections MAM and 86D of component 675, with the switch in the rest position.</p> <p>– Repeat this operation with the switch pressed, and check the continuity and the absence of interference resistance between the two connections.</p> <p>If these 2 checks are not correct, replace the clutch pedal position sensor, component code 675 (see MR 388 or 451, Mechanical, 37A, Mechanical component controls, Clutch pedal position sensor: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Clutch pedal: Removal - Refitting).</p>
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AFTER REPAIR	<p>Deal with any faults. Clear the faults from the computer memory.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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ET673	<u>JAMMED ACCELERATOR PEDAL</u>
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STATUS DEFINITION	YES: This status indicates that the accelerator pedal is jammed. NO: This status indicates that the accelerator pedal is not jammed.
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NOTES	To reinitialise this status, clear the fault memory by running command RZ001 Fault memory .
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Conformity check: Engine stopped, ignition on or engine running.	
YES	Check that the accelerator pedal is not jammed or that there is nothing impeding its operation (floor carpet, etc.). Check the brake switch (see the interpretation of fault DF050 Brake switch circuit).

AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET717	<u>TARGET GEARBOX RATIO</u>
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STATUS DEFINITION	REVERSE: This status indicates the gear engaged. DECLUTCHED: This status indicates the gear engaged. 1: This status indicates the gear engaged. 2: This status indicates the gear engaged. 3: This status indicates the gear engaged. 4: This status indicates the gear engaged 5: This status indicates the gear engaged.
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET734 ET735 ET736	<u>HEATING RESISTOR NO.1 RELAY CONTROL</u> <u>HEATING RESISTOR NO.2 RELAY CONTROL</u> <u>HEATING RESISTOR NO.3 RELAY CONTROL</u>
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STATUS DEFINITION	ACTIVE: This status indicates that the relay is supplied. INACTIVE: This status indicates that the relay is not supplied.
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Conformity check: Engine stopped, ignition on or engine running.	
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INACTIVE	Statuses ET734 , ET735 and ET736 are INACTIVE with the ignition on and the engine stopped, or when the engine is warm.
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ACTIVE	Statuses ET734 , ET735 and ET736 are ACTIVE when the engine is started, the engine coolant temperature is low (< 15°C) and the air temperature is low (< 5°). This program allows the engine coolant to be heated to enable the passenger compartment to be heated. To control the operation of the relays, run the following commands: AC250 Heating resistor no.1 relay. AC251 Heating resistor no.2 relay. AC252 Heating resistor no.3 relay. In the event of a fault, refer to the interpretation of faults: DF992 Additional heater relay 1 circuit. DF993 Additional heater relay 2 circuit. DF994 Additional heater relay 3 circuit.
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET759	<u>BRAKING MULTIPLEX SIGNAL DETECTED</u>
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STATUS DEFINITION	ABSENT: This status indicates that the braking multiplex signal detected is absent . PRESENT: This status indicates that the braking multiplex signal detected is present . INTERMEDIATE: This status indicates that the braking multiplex signal detected is intermediate.
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Conformity check: Engine stopped, ignition on or engine running.

Vehicle under + after ignition feed. – Parking brake released, – Gear lever in 1st. Neither the brake pedal nor the clutch pedal depressed.	
Check status ET759 .	

PRESENT - INTERMEDIATE	Check the correct position and the conformity of the brake pedal sensor. Run fault finding on the UCH domain (see 87B, UCH).
"ABSENT"	The brake pedal sensor is correct.

AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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ET836	<u>TDC SENSOR SIGNAL</u>
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STATUS DEFINITION	DETECTED: This status indicates that the TDC sensor signal is detected. NOT DETECTED: This status indicates that the TDC sensor signal is not detected.
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Conformity check: Engine stopped, ignition on or engine running.	
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NOT DETECTED	In the event of a fault, refer to the interpretation of fault DF120 Engine speed sensor signal .
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AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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V42_V04_ET836 / V42_V06_ET836

ET846	<u>INJECTION PROTECTION</u>
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STATUS DEFINITION	NOT PROTECTED BLANK: No signal PROTECTED STATUS 1: Fault on coded line circuit PROTECTED STATUS 2: Fault on immobiliser memory area PROTECTED STATUS 3: Injection computer self-protection
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BLANK:

- The injection computer does not receive a signal from the UCH computer.
- Run fault finding on the multiplex network.

PROTECTED STATUS 1:

The UCH computer does not respond to the authentication requests from the injection computer.

Several possibilities:

- either the UCH computer was not programmed with the vehicle's card/key,
- or the vehicle's card/key is not recognised by the UCH computer.
- Run fault finding on the UCH computer.

PROTECTED STATUS 2:

Several possibilities:

- either the injection computer is blank and was not programmed with the immobiliser code, and the UCH computer is not authorised to send the immobiliser code,
- Connect a diagnostic tool to the UCH computer to authorise it to send the immobiliser code.
- or the UCH computer has detected a fault,
- Run fault finding on the UCH computer.

AFTER REPAIR	Deal with any faults. Clear the faults from the computer memory. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool .
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**ET846
CONTINUED**

PROTECTED STATUS 3:

There are several possible causes, in the following order:

- check that the UCH computer has not detected a fault,
- Run fault finding on the UCH computer.
- check that the injection computer has not already been programmed with the immobiliser code for another vehicle using the status.
- Check that the injection computer corresponds correctly to the vehicle on which fault finding is being run.
- if none of the 2 previous points is the cause, check that the injection computer is not in anti-scanning mode after undergoing several failed authentication attempts,
- It only leaves this mode when the following sequence of operations is carried out:
 - 1- switch off the ignition,
 - 2- switch on the ignition again and wait for at least **20 seconds** under + after ignition feed,
 - 3- switch off the ignition and ensure that the end of the self-feed phase of the injection computer is observed (the length of time varies depending on the engine coolant temperature and can be **10 minutes** maximum),
 - 4- switch on the ignition again and start the vehicle,
 - 5- if the vehicle does not start, repeat this procedure **3 times**,
 - 6- if the vehicle still does not start, contact the Techline.

AFTER REPAIR

Deal with any faults. Clear the faults from the computer memory.
Switch off the ignition and carry out a road test followed by a test with the **diagnostic tool**.

Tool Parameter	Diagnostic tool title
PR002	Alternator charge
PR015	Engine torque
PR030	Accelerator pedal position
PR037	Refrigerant pressure
PR041	Turbocharging pressure
PR055	Engine speed
PR059	Inlet air temperature
PR064	Coolant temperature
PR071	Computer feed voltage
PR084	Coolant temperature sensor voltage
PR089	Vehicle speed
PR097	Motorised throttle lower stop programmed value
PR098	Upstream oxygen sensor voltage
PR099	Downstream oxygen sensor voltage
PR102	Canister bleed solenoid valve OCR*
PR118	Measured throttle position gang 1
PR119	Measured throttle position gang 2
PR138	Richness correction
PR139	Operating adaptive richness
PR147	Pedal potentiometer voltage gang 1
PR148	Pedal potentiometer voltage gang 2
PR215	Sensor supply voltage no. 1
PR216	Sensor supply voltage no. 2
PR312	Inlet manifold vacuum
PR313	Linearised manifold pressure
PR344	Pressure sensor voltage
PR427	Average pinking signal
PR429	Measured throttle position
PR444	Integral idling speed regulation correction

OCR*: Opening cyclic ratio

Tool Parameter	Diagnostic tool title
PR446	Upstream O2 sensor heating resistance
PR447	Downstream O2 sensor heating resistor
PR448	Ignition advance
PR469	Cylinder 1 pinking value
PR471	Cylinder 2 pinking value
PR473	Cylinder 3 pinking value
PR475	Cylinder 4 pinking value
PR492	Motorised throttle position setpoint
PR538	Measured throttle voltage, gang 2
PR539	Measured throttle voltage gang 1
PR606	Adaptive idling speed correction
PR624	Richness regulation programming offset
PR625	Richness regulation programming gain
PR770	Camshaft offset
PR814	Number of active heating resistors
PR831	Combustion misfiring counter
PR832	Combustion misfiring counter
PR833	Combustion misfiring counter
PR834	Combustion misfiring counter
PR847	Inlet air temperature sensor voltage
PR872	Refriger.* pressure sensor voltage
PR877	Estimated engine oil temperature
PR887	Motorised throttle safe mode programmed value
PR931	Raw turbocharging pressure
PR1026	Crankshaft synchro.* loss counter
PR1029	Alternator power
PR1129	Brake contact no.1 duration
PR1153	Brake contact no.2 duration

Refriger.*: refrigerant

Synchro*: Synchronisation

PR015	<u>ENGINE TORQUE</u>
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PARAMETER DEFINITION	This parameter indicates the engine torque in N.m .
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Conformity check with the engine running and engine coolant temperature > 80°C
The value must be between 20 Nm < PR015 < 40 Nm This parameter is only valid when the engine is running.

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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PR030	<u>ACCELERATOR PEDAL POSITION</u>
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PARAMETER DEFINITION	This parameter indicates the accelerator pedal position as a %.
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
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Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

No load \leq 16% Full load \geq 85% Check that the pedal mechanism has not seized. Check the cleanliness and condition of the pedal potentiometer connections, component code 921 and the injection computer connections, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Disconnect the battery and the injection computer. Use the "Universal bornier" to check the insulation and continuity of the following connections: – 3LT between components 120 and 921 , – 3LR between components 120 and 921 , – 3LS between components 120 and 921 , – 3LV between components 120 and 921 , – 3LU between components 120 and 921 , – 3LW between components 120 and 921 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. In the event of a fault, apply the interpretation of DF974 Pedal potentiometer circuit gang 1 and DF975 Pedal potentiometer circuit gang 2 .

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR037	<u>REFRIGERANT PRESSURE</u>
--------------	-----------------------------

PARAMETER DEFINITION	This parameter indicates the refrigerant pressure in bar .
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NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster .
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Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

The refrigerant pressure must be between 2 bar < PR037 < 27 bar . Check the cleanliness and condition of the refrigerant pressure sensor and its connections, component code 1202 and the injection computer connections, component code 120 . If the connector or connectors are faulty and if there is a repair procedure (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the connector(s), otherwise replace the wiring. Disconnect the battery and the injection computer. Using the universal bornier in place of the computer, check for insulation and continuity on the following connections: – 38Y between components 120 and 1202 , – 38X between components 120 and 1202 , – 38U between components 120 and 1202 . If the connection or connections are faulty and there is a repair procedure (see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair), repair the wiring, otherwise replace it. If the fault is still present, replace the refrigerant pressure sensor. (see MR 388 or 451, Mechanical, 62A, Air conditioning, Pressure sensor: Removal - Refitting). (see MR 388 or 451, Mechanical, 62A, Air conditioning: Precautions for repair) and (see MR 388 or 451, Mechanical, Air conditioning: Parts and consumables for the repair). If the fault is present , check the air conditioning circuit (see MR 388 or 451, Mechanical, 62A, Air conditioning: Check).

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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PR055	<u>ENGINE SPEED</u>
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PARAMETER DEFINITION	This parameter indicates the engine's rotational speed in rpm .
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Conformity check with engine stopped and ignition on.

With the ignition on the value must be 0 rpm . In the event of a fault, apply interpretation of DF120 Engine speed sensor signal .

Conformity check with the engine running and engine coolant temperature > 80°C
--

With the engine running at idle speed, the value must be ≈ 750 rpm . In the event of a fault, apply the interpretation of DF120 .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR055 / V42_V06_PR055

PR059	<u>INLET AIR TEMPERATURE</u>
--------------	------------------------------

PARAMETER DEFINITION	This parameter indicates the air temperature in °C.
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Conformity check with engine stopped and ignition on.

With the ignition on the inlet air temperature varies according to the exterior temperature. In the event of a fault, consult the interpretation of fault DF002 Air temperature sensor circuit . Parameter PR059 ≈ PR064 Coolant temperature engine cold.

Conformity check with the engine running and engine coolant temperature > 80°C
--

With the engine running at idle speed the inlet air temperature varies according to the engine coolant temperature. In the event of a fault, refer to the interpretation of fault DF002 .

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR059 / V42_V06_PR059

PR064	<u>COOLANT TEMPERATURE</u>
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PARAMETER DEFINITION	This parameter indicates the engine coolant temperature in °C.
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NOTES	There must be no present or stored faults. Perform this fault finding procedure: – after finding an inconsistency in the parameter, – after a customer complaint (e.g. lack of power).
--------------	--

Conformity check with engine stopped and ignition on.

With the ignition on the coolant temperature varies according to the exterior temperature. In the event of a fault, consult the interpretation of fault DF001 Coolant temperature sensor circuit .
--

Conformity check with the engine running and engine coolant temperature > 80°C
--

With the engine running at idle speed the coolant temperature varies according to the engine temperature. If there is a fault, refer to the interpretation of fault DF001 .

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
---------------------	---

V42_V04_PR064 / V42_V06_PR064

PR071	<u>COMPUTER SUPPLY VOLTAGE</u>
--------------	--------------------------------

PARAMETER DEFINITION	This parameter indicates the computer supply voltage in volts .
-----------------------------	--

Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

The voltage should be between: 9 V < PR071 < 16 V In the event of a fault, run fault finding on the charging circuit (see 16A, Checking the charging circuit) and refer to the interpretation of DF047 Computer supply voltage .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR071 / V42_V06_PR071

PR089	<u>VEHICLE SPEED</u>
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PARAMETER DEFINITION	Gives the vehicle speed in km/h .
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Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

Carry out a road test, observing the vehicle speed on the instrument panel and the information given by the diagnostic tool. If there is an inconsistency between the two values, run complete fault finding on the ABS computer (see 38C, ABS).

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR089 / V42_V06_PR089

PR097	<u>MOTORISED THROTTLE VALVE LOWER STOP PROGRAMMED VALUE</u>
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PARAMETER DEFINITION	This parameter indicates the programmed throttle valve upper stop value as a %.
-----------------------------	---

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

The value must be ≈ 9%. In the event of a fault, apply the interpretation of ET051 Throttle stop programming .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR097 / V42_V06_PR097

PR098	<u>UPSTREAM OXYGEN SENSOR VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the upstream oxygen sensor voltage in millivolts .
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Conformity check with the engine running and engine coolant temperature > 80°C
--

The upstream oxygen sensor voltage must be between: 20 mV < PR098 < 1395 mV. In the event of a fault, apply interpretation of DF092 Upstream oxygen sensor circuit .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR098 / V42_V06_PR098

PR099	<u>DOWNSTREAM OXYGEN SENSOR VOLTAGE</u>
--------------	---

PARAMETER DEFINITION	This parameter indicates the downstream oxygen sensor voltage in millivolts
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Conformity check with the engine running and engine coolant temperature > 80°C
--

The downstream oxygen sensor voltage must be between: 0 mV < PR099 < 1000 mV. In the event of a fault, apply interpretation of DF093 Downstream oxygen sensor circuit.
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR102	<u>CANISTER BLEED SOLENOID VALVE OCR*</u>
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PARAMETER DEFINITION	This parameter indicates the canister bleed solenoid valve opening cyclic ratio in %.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
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The value must be between 0% and 100% .
--

* ocr = opening cyclic ratio

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

PR118

MEASURED THROTTLE POSITION GANG 1

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle valve 1 position setpoint as a %.

Conformity check with the engine running and engine coolant temperature > 80°C

With the engine idling, the value must be \approx 13%.

If there is a fault, use the interpretation of **DF095 Throttle potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR119

MEASURED THROTTLE POSITION GANG 2

**PARAMETER
DEFINITION**

This parameter indicates the motorised throttle valve 2 position setpoint as a %.

Conformity check with the engine running and engine coolant temperature > 80°C

With the engine idling, the value must be \approx 13%.

If there is a fault, use the interpretation of **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR138

RICHNESS CORRECTION

**PARAMETER
DEFINITION**

This parameter indicates the richness correction as a %.

Conformity check with the engine running and engine coolant temperature > 80°C

This value changes according to the richness signals from the computer.
The richness correction value must be ≈ 50%.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR139	<u>RICHNESS ADAPTIVE OPERATION</u>
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PARAMETER DEFINITION	There must be no faults present.
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Conformity check with the engine running and engine coolant temperature > 80°C
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Check the sealing of the fuel vapour absorber bleed.

Repair if necessary.

With the engine warm in the idle speed regulation phase, look at parameter **PR139**.

- If the parameter goes to **MAXIMUM stop**, there is not enough fuel or too much air in the mixture.
- If the parameter goes to **MINIMUM stop**, there is too much fuel or not enough air in the mixture.

Check the cleanliness and correct operation of:

- petrol filter,
- petrol pump,
- fuel circuit,
- tank,
- air supply pipe,
- air filter,
- plugs.

Repair if necessary.

Check:

- the compressions,
- the valve clearance,
- the ignition.

Repair if necessary.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

PR147

PEDAL POTENTIOMETER GANG 1 VOLTAGE

**PARAMETER
DEFINITION**

This parameter indicates the pedal potentiometer gang 1 voltage in **volts**.

Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

The value must be $\approx 0.72 \text{ V}$ and varies according to the status of the pedal.

In the event of a fault, apply the interpretation of fault **DF974 Pedal potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR148	<u>PEDAL POTENTIOMETER GANG 2 VOLTAGE</u>
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PARAMETER DEFINITION	This parameter indicates the pedal potentiometer gang 2 voltage in volts .
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Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C.

The value must be $\approx 0.52 \text{ V}$ and varies according to the status of the pedal. In the event of a fault, apply the interpretation of fault DF975 Pedal potentiometer circuit gang 2 .

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR148 / V42_V06_PR148

PR215	<u>SENSOR SUPPLY VOLTAGE NO. 1</u>
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PARAMETER DEFINITION	This parameter indicates the supply voltage no. 1 of the sensors in Volts .
-----------------------------	--

Conformity check: Engine stopped and the ignition on, or the engine running and the engine coolant temperature > 80°C without electrical consumers.

The voltage of PR215 is approximately 5000 mV . In the event of a fault, run fault finding on the charging circuit and consult the interpretation of DF011 Sensor supply voltage no. 1 .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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PR216	<u>SENSOR SUPPLY VOLTAGE NO. 2</u>
--------------	------------------------------------

PARAMETER DEFINITION	This parameter indicates the supply voltage no. 2 of the sensors in Volts .
-----------------------------	--

Conformity check: Engine stopped and the ignition on, or the engine running and the engine coolant temperature > 80°C without electrical consumers.

The voltage of PR216 is approximately 5000 mV . In the event of a fault, run fault finding on the charging circuit and consult the interpretation of DF012 Sensor supply voltage no. 2 .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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PR312	<u>MANIFOLD PRESSURE</u>
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PARAMETER DEFINITION	This parameter indicates the manifold pressure in mbar .
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Conformity check with the engine running and engine coolant temperature > 80°C
--

With the engine idling , the value must be ≈ 500 mbar . With the engine running and throttle open , the value must be ≈ 1000 mbar .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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V42_V04_PR312 / V42_V06_PR312

PR427	<u>AVERAGE PINKING SIGNAL</u>
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PARAMETER DEFINITION	This parameter indicates the average pinking signal.
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Conformity check with the engine running and engine coolant temperature > 80°C
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This parameter varies according to the pinking status in the combustion chamber. In the event of a fault, apply the interpretation of fault DF088 Pinking sensor circuit .
--

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR429	<u>MEASURED THROTTLE POSITION</u>
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PARAMETER DEFINITION	This parameter indicates the throttle valve position measured as a %.
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Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

Without action on the accelerator pedal, the value must be ≈ 10%.
When the accelerator pedal is fully depressed, the value must be ≈ 85%.
In the event of a fault, apply the interpretation of faults **DF095 Throttle potentiometer circuit gang 1** and **DF096 Throttle potentiometer circuit gang 2**.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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PR444

BUILT-IN CORRECTION FOR IDLE SPEED REGULATION

**PARAMETER
DEFINITION**

This parameter indicates the built-in correction for idle speed regulation in N.m.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

The built-in idle speed regulation correction is continuously calculated to take into account consumer air demand.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR446

UPSTREAM O2 SENSOR HEATING RESISTOR

**PARAMETER
DEFINITION**

This parameter indicates the heating resistance of the downstream oxygen sensor in Ohms.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

The value must be $\approx 9 \Omega$ at 20°C.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR447

DOWNSTREAM O2 SENSOR HEATING RESISTOR

**PARAMETER
DEFINITION**

This parameter indicates the heating resistance of the downstream oxygen sensor in **Ohms**.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

The value must be $\approx 9 \Omega$ at 20°C.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR448

IGNITION ADVANCE

**PARAMETER
DEFINITION**

This parameter indicates the ignition advance in **volts**.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

The value must be $\approx 0^\circ \text{ V}$ with the ignition on and **4 V** at idle speed.
In the event of a fault, apply the interpretation of fault **DF120 Engine speed sensor signal**.

AFTER REPAIR

Deal with any faults displayed by the **diagnostic tool**.
Clear the computer memory.
Carry out a road test, then check with the **diagnostic tool**.

PR538	<u>MEASURED THROTTLE VOLTAGE, GANG 2</u>
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PARAMETER DEFINITION	This parameter indicates the throttle valve gang 2 voltage measured in volts .
-----------------------------	---

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C
--

The value must be ≈ 0.60 V. In the event of a fault, apply the interpretation of fault DF096 Throttle potentiometer circuit gang 2 .
--

AFTER REPAIR	Deal with any faults displayed by the diagnostic tool . Clear the computer memory. Carry out a road test, then check with the diagnostic tool .
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PR539

THROTTLE VALVE GANG 1 MEASURE VOLTAGE

**PARAMETER
DEFINITION**

This parameter indicates the throttle valve voltage, gang 1 measured in **volts**.

Conformity check with engine stopped and ignition on, or engine running, and engine coolant temperature > 80°C

The value must be $\approx 0.35 \text{ V}$.

In the event of a fault, apply the interpretation of fault **DF095 Throttle potentiometer circuit gang 1**.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

PR814	<u>NUMBER OF ACTIVE HEATING RESISTORS</u>
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PARAMETER DEFINITION	This parameter indicates the number of active heating resistors and can be between 0 to 5 depending on the relays activated. 0 if no relay is active 1 if relay 1 is active 2 if relay 2 is active 3 if relays 1 and 2 are active 4 if relays 2 and 3 are active 5 if all of the relays are active
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Conformity check: Engine stopped and ignition on, or engine running, and engine coolant temperature < 80°C
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In the event of a fault, consult the interpretation of faults: DF992 Additional heater relay 1 circuit, DF993 Additional heater relay 2 circuit, DF994 Additional heater relay 3 circuit.

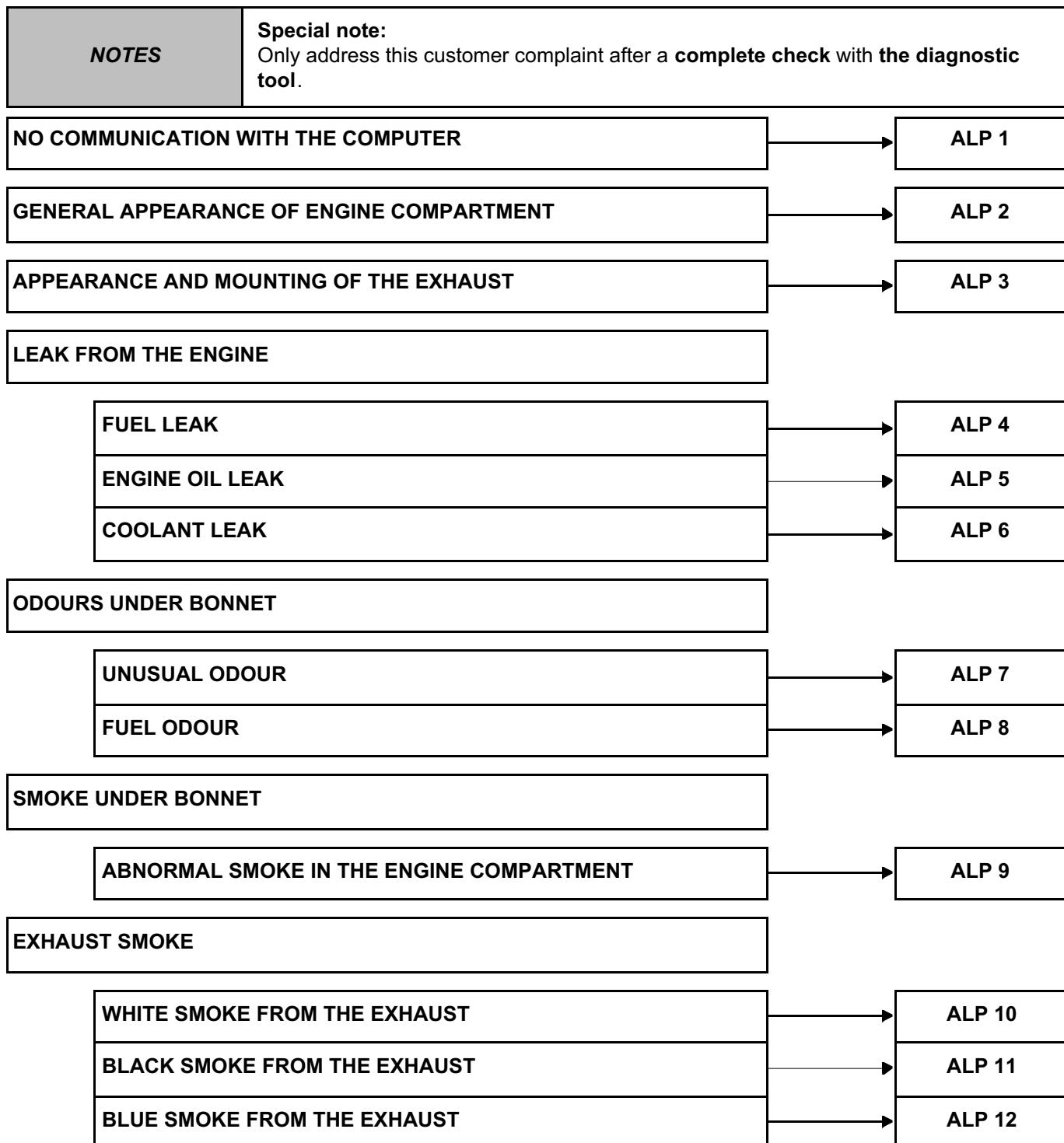
AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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Tool command	Diagnostic tool title	Comments
RZ001	Fault memory	This command is used to clear the faults stored in the computer.
RZ003	Engine adaptives	This command enables a long engine start time.
RZ031	Throttle stop programming	This command is used to reset the necessary system adaptives if replacing the throttle valve.
RZ033	Richness regulation programming	This command is used to reset the necessary system adaptives if replacing the injectors.
RZ037	Flywheel target programming	This command is used to reset the necessary system adaptives if replacing the TDC* sensor.
AC005	Cylinder 1 injector	This command is used to perform an audible check on injector 1.
AC006	Cylinder 2 injector	This command is used to perform an audible check on injector 2.
AC007	Cylinder 3 injector	This command is used to perform an audible check on injector 3.
AC008	Cylinder 4 injector	This command is used to perform an audible check on injector 4.
AC015	Fuel pump relay	This command is used to check the fuel pump.
AC017	Canister bleed solenoid valve	This command is used to check the canister bleed solenoid valve.
AC027	Motorised throttle	This command is used to check the motorised throttle.
AC038	Low speed GMV** relay	This command is used to check the low speed GMV** relay.
AC039	High speed GMV** relay	This command is used to check the high speed GMV** relay.
AC180	Air conditioning compressor relay control	This command is used to check the air conditioning compressor relay.
AC217	Additional fuel circuit solenoid valve	This command is used to check the additional fuel circuit solenoid valve. Only on Flexfuel injection
AC224	Additional fuel circuit pump relay	This command is used to check the additional fuel circuit pump relay. Only on Flexfuel injection

TDC*: Top Dead Centre

GMV**: Fan assembly

AC250	Heating resistor 1 relay	This command is used to activate the heating resistor no.1 relay.
AC251	Heating resistor 2 relay	This command is used to activate the heating resistor no.2 relay.
AC252	Heating resistor 3 relay	This command is used to activate the heating resistor no.3 relay.
SC001	Write saved data	Use this command after replacing or (re)programming the computer (if the data has been saved using command SC003).
SC003	Save computer data	This command enables the computer operating data, the engine adaptives, to be recorded.
SC006	Start OBD test: Catalytic converter	This command is used to test the catalytic converter.
SC007	Start OBD test: O2 sensor	This command is used to test the O2 sensors.
VP010	Enter VIN.	This command is used to enter the VIN .
VP036	Fuel supply inhibited	This command is used to inhibit fuel supply to the engine.
VP037	Lift fuel supply inhibition	This command is used to stop command VP036 .



EXCESSIVE CONSUMPTION

EXCESSIVE FUEL CONSUMPTION

ALP 13

EXCESSIVE COOLANT CONSUMPTION

ALP 14

EXCESSIVE OIL CONSUMPTION

ALP 15

ENGINE STARTING

IMPOSSIBLE TO START THE ENGINE

ALP 16

ENGINE STALLS WHEN COLD

ALP 17

THE ENGINE STARTS WITH DIFFICULTY

ALP 18

PERFORMANCE

LACK OF POWER OR TORQUE

ALP 19

ACCELERATION GAP

ALP 20

DRIVING PLEASURE

ROUGH IDLE

ALP 21

IDLE SPEED TOO HIGH OR TOO LOW

ALP 22

JERKING OR HESITATION

ALP 23

ENGINE STALLS

ALP 24

ERRATIC ACCELERATION

ALP 25

ERRATIC DECELERATION

ALP 26

ENGINE RACING (WITHOUT ACTION ON THE PEDAL)

ALP 27

ALP 1	No dialogue with the computer
NOTES	See the Wiring Diagrams Technical Note for Logan, Sandero, Duster.
Try to establish dialogue with a computer on another vehicle to make sure that the diagnostic tool is not faulty. If the tool is not the cause and communication cannot be established with any other computer on the same vehicle, it is possible that another computer is disrupting the multiplex network.	
Check the voltage of the battery. If the battery voltage is between 9.5 V and 17.5 V , run fault finding on the charging circuit.	
<ul style="list-style-type: none">– Check the presence and condition of the injection fuses on the UPC and in the engine fuse box.– Check the connection of the computer connectors, component code 120.– Check the injection computer earths (quality, oxidation, tightness of the earth bolts on the battery terminal).– Check that the supply to the computer is correct:– Earth on connection NH of component 120,– + 12V on connection 3FB of component 120.	
If the connection(s) are faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
Check that the diagnostic socket , component code 225 is correctly supplied: <ul style="list-style-type: none">– + Before ignition feed on connection BP56 of component 225,– + After ignition feed on connection AP10 of component 225,– Earth on connections MAM and NC of component 225.	
If the connection(s) are faulty and there is a repair method (see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair), repair the wiring, otherwise replace it.	
If dialogue has still not been established after these checks, contact the techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 2	General appearance of engine compartment
Check the fan assembly.	
Check the air filter unit.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the injector rail.	
Check the inlet manifold.	
Check the oil filter.	
Check the catalytic converter.	
Check the exhaust manifold.	
Check the accessories belt.	
Check the dipstick.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 3

Appearance and mounting of the exhaust

Check the catalytic converter.

Check the exhaust manifold.

Check the cylinder head.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 4

Fuel leak

Check the fuel pump relay by running **TEST 1 Fuel supply pump relay check**.

Check the air pipes.

Check the additional fuel circuit solenoid valve by running **TEST 5 Checking the additional fuel tank**.

Check the spark plugs.

Check the injector rail.

Check the additional petrol circuit pump by running **TEST 12 Additional fuel tank pump check**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 5	Engine oil leak
Check the air filter unit.	
Check the oil filler cap.	
Check the air pipes.	
Check the inlet manifold.	
Check the oil filter.	
Check the oil circuit.	
Check the oil pump.	
Check the cylinder head.	
Check the camshaft.	
Check the rotating parts.	
Check the dipstick.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

ALP 6

Coolant leak

Check the coolant pump.

Check the cylinder head.

Check the cooling system.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 7	Unusual odour
Check the air pipes.	
Check the catalytic converter.	
Check the coolant pump.	
Check the exhaust manifold.	
Check the cylinder head.	
Check the timing.	
Check the cooling system.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

ALP 8

Fuel odours

Check the air pipes.

Check the injector rail.

Check the inlet manifold.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 9	Abnormal smoke in the engine compartment
Check the air pipes.	
Check the injector rail.	
Check the inlet manifold.	
Check the oil circuit.	
Check the catalytic converter.	
Check the coolant pump.	
Check the exhaust manifold.	
Check the cylinder head.	
Check the timing.	
Check the cooling system.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
---------------------	---

ALP 10

White smoke from the exhaust

Check the air filter unit.

Check the air pipes.

Check the inlet manifold.

Check the exhaust manifold.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 11	Black smoke from the exhaust
Check the air filter unit.	
Check the air pipes.	
Check the air inlet temperature sensor by running TEST 6 Checking the air temperature sensor .	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the injector rail.	
Check the injectors by running TEST 13 Checking the injectors .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 12	Blue smoke from the exhaust
Check the oil.	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the spark plugs.	
Check the ignition coil by running TEST 14 Checking the ignition coil .	
Check the injectors by running TEST 13 Checking the injectors .	
Check the oil filter.	
Check the oil circuit.	
Check the exhaust manifold.	
Check the oil pump.	
Check the pistons and piston rings.	
Check the cylinder head.	
Check the inlet and exhaust valves.	
Check the rotating parts.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 13	Excessive fuel consumption
Check the air filter unit.	
Check the air pipes.	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the injector rail.	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the pinking sensor by running TEST 11 Pinking sensor check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
Check the catalytic converter.	
Check the camshaft.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 14

Excessive coolant consumption

Check the engine cooling fan assembly.

Check the coolant pump.

Check the cylinder head.

Check the cooling system.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 15

Excessive oil consumption

Check the engine cooling fan assembly.

Check the oil circuit.

Check the oil filter.

Check the pistons and piston rings.

Check the cylinder head.

Check the valves.

Check the rotating parts.

Check the dipstick.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 16	Impossible to start the engine
Check the fuel pump relay by running TEST 1 Petrol supply pump relay check .	
Check the air filter unit.	
Check the oil.	
Check the air pipes.	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the spark plugs.	
Check the injector rail.	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the coolant pump.	
Check the cylinder head.	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the rotating parts.	
Check the accessories belt.	
Check the supply relay and the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 17	Engine stalls when cold
Check the air filter unit.	
Check the oil.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the injector rail.	
Check the injectors by running TEST 13 Injector check .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 18	The engine starts with difficulty.
Check the air filter unit.	
Check the oil.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the throttle valve by running TEST 3 Throttle valve check .	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the spark plugs.	
Check the injector rail.	
Check the ignition coil by running TEST 14 Checking the ignition coil .	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the coolant pump.	
Check the oil pump.	
Check the cylinder head.	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the cooling system.	
Check the rotating parts.	
Check the accessories belt.	
Check the supply relay and the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 19	Lack of power or torque
Check the air filter unit.	
Check that the floor carpet is correctly positioned.	
Check the engine cooling fan assembly.	
Check the accelerator pedal potentiometer by running TEST 8 Accelerator pedal potentiometer check .	
Check the air filter unit.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the air inlet temperature sensor by running TEST 6 Checking the air temperature sensor .	
Check the throttle valve by running TEST 3 Throttle valve check .	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the spark plugs.	
Check the injector rail.	
Check the inlet manifold.	
Check the ignition coil by running TEST 14 Checking the ignition coil .	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the pinking sensor by running TEST 11 Pinking sensor check .	
Check the oil circuit.	
Check the oil filter.	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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**ALP 19
CONTINUED**

Check the downstream oxygen sensor by running **TEST 18 Checking the downstream O2 sensor.**

Check the catalytic converter.

Check the exhaust manifold.

Check the pistons and piston rings.

Check the cylinder head.

Check the camshaft.

Check the valves.

Check the timing.

Check the rotating parts.

Check the injection computer.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 20	Flat spots when accelerating
Check the accelerator pedal potentiometer by running TEST 8 Accelerator pedal potentiometer check .	
Check the brake pedal switch by running TEST 9 Brake pedal switch check .	
Check the air filter unit.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the air inlet temperature sensor by running TEST 6 Checking the air temperature sensor .	
Check the throttle valve by running TEST 3 Throttle valve check .	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the spark plugs.	
Check the injector rail.	
Check the inlet manifold.	
Check the ignition coil by running TEST 14 Checking the ignition coil .	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the pinking sensor by running TEST 11 Pinking sensor check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
Check the catalytic converter.	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 21	Rough idle
	Check the alternator charge signal module by running TEST 2 Alternator signal module check .
	Check the accelerator pedal potentiometer by running TEST 8 Accelerator pedal potentiometer check .
	Check the air filter unit.
	Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .
	Check the throttle valve by running TEST 3 Throttle valve check .
	Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .
	Check the spark plugs.
	Check the injector rail.
	Check the inlet manifold.
	Check the ignition coil by running TEST 14 Checking the ignition coil .
	Check the injectors by running TEST 13 Checking the injectors .
	Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .
	Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .
	Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .
	Check the cylinder head.
	Check the camshaft.
	Check the valves.
	Check the timing.
	Check the rotating parts.
	Check the injection computer.
	Check the injection pump.
	If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 22	Idling speed too high or too low
Check the alternator charge signal module by running TEST 2 Alternator signal module check .	
Check the accelerator pedal potentiometer by running TEST 8 Accelerator pedal potentiometer check .	
Check the air filter unit.	
Check the air inlet temperature sensor by running TEST 6 Checking the air temperature sensor .	
Check the throttle valve by running TEST 3 Throttle valve check .	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the coolant temperature sensor by running TEST 15 Coolant temperature sensor check .	
Check the spark plugs.	
Check the injector rail.	
Check the inlet manifold.	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
Check the cylinder head.	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 23	Jerking or hesitation
Check the alternator charge signal module by running TEST 2 Alternator signal module check .	
Check the fuel pump relay by running TEST 1 Petrol supply pump relay check .	
Check the accelerator pedal potentiometer by running TEST 8 Accelerator pedal potentiometer check .	
Check the brake pedal switch by running TEST 9 Brake pedal switch check .	
Check the air filter unit.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the air inlet temperature sensor by running TEST 6 Checking the air temperature sensor .	
Check the throttle valve by running TEST 3 Throttle valve check .	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the spark plugs.	
Check the injector rail.	
Check the inlet manifold.	
Check the ignition coil by running TEST 14 Checking the ignition coil .	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the supply relay and the injection computer.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 24	Engine stalls
Check the fuel pump relay by running TEST 1 Petrol supply pump relay check .	
Check the air filter unit.	
Check the inlet manifold air pressure sensor by running TEST 7 Air inlet pressure sensor check .	
Check the air pipes.	
Check the additional fuel circuit solenoid valve by running TEST 5 Checking the additional fuel tank .	
Check the injector rail.	
Check the injectors by running TEST 13 Checking the injectors .	
Check the additional petrol circuit pump by running TEST 12 Additional fuel tank pump check .	
Check the TDC sensor by running TEST 10 TDC sensor check .	
Check the upstream oxygen sensor by running TEST 17 Checking the upstream O2 sensor .	
Check the downstream oxygen sensor by running TEST 18 Checking the downstream O2 sensor .	
Check the camshaft.	
Check the valves.	
Check the timing.	
Check the injection computer.	
Check the injection computer supply relay.	
If the fault is still present, contact the Techline.	

AFTER REPAIR	Carry out a road test, then check with the diagnostic tool .
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ALP 25

Erratic acceleration

Check that the floor carpet is correctly positioned.

Check the accelerator pedal potentiometer by running **TEST 8 Accelerator pedal potentiometer check**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 26

Erratic deceleration

Check the inlet manifold air pressure sensor by running **TEST 7 Air inlet pressure sensor check**.

Check the throttle valve by running **TEST 3 Throttle valve check**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

ALP 27

Engine racing (without action on the accelerator pedal)

Check the accelerator pedal potentiometer by running **TEST 8 Accelerator pedal potentiometer check**.

Check the throttle valve by running **TEST 3 Throttle valve check**.

Check the injection computer.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

Fuel supply pump relay check	TEST 1
Alternator signal module check	TEST 2
Throttle valve check	TEST 3
Fuel vapour absorber solenoid valve check	TEST 4
Additional fuel tank check	TEST 5
Air temperature sensor check	TEST 6
Air inlet pressure sensor check	TEST 7
Accelerator pedal potentiometer check	TEST 8
Brake pedal switch check	TEST 9
TDC sensor check	TEST 10
Pinking sensor check	TEST 11
Additional fuel tank pump check	TEST 12
Injector check	TEST 13
Ignition coil check	TEST 14
Coolant temperature sensor check	TEST 15
Fan relay check	TEST 16
Upstream O2 sensor check	TEST 17
Downstream O2 sensor check	TEST 18
Fuel conformity check	TEST 19

TEST 1

Fuel supply pump relay check

Listen to the operation of the fuel supply pump, as well as the fuel pump relay by running command **AC015 Fuel pump relay**.

Check the fuel pump supply on connection **3NA** by running command **AC015 Fuel pump relay**.

Check the **continuity, insulation, and absence of interference resistance** on the following connections:

- **3NA** between components **1047** and **833**,
- **MG** between component **833** and the **earth**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring. Otherwise replace the wiring.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 2

Alternator signal module check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

With the engine running, check the alternator charge without any electrical consumers switched on using **PR002 Alternator charge**, then switch on the consumers and check the increase in **PR002**.

Check the **cleanliness** and **condition** of the alternator connector, component code **103** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connection:
– **2K** between components **103** and **120**.

If the connection is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the check is correct, replace the alternator signal module, component code **103** (see **MR 388 or 451, Mechanical, 16A, Starting - Charging, Alternator: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 3

Throttle valve check

Check that parameter **PR444 Idling speed regulation integral correction** is between:

5 N.m < PR444 < 10 N.m.

The attempt is made with the engine idling and warm (**75°C**), without any electrical consumers switched on.

The value of **PR444** must be read at least **20 minutes** after the engine coolant temperature has reached **75°C**.

If the value of **PR444** is greater than **10 N.m**, program the throttle again using command **RZ031 Throttle stop programming**.

If the value of **PR444** is less than **-5N.m**, check the fitting of the throttle and check for possible air leaks (see **MR 388 or MR451, Mechanical, 12A, Fuel mixture, Throttle valve: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 4

Fuel vapour absorber solenoid valve check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Check the cleanliness, mounting, possible leaks and the hoses of the fuel vapour absorber solenoid valve, component code **371** (see **MR 388, Mechanical, 14A, Emission control, Fuel vapour recirculation circuit: Check** or **MR 451, Mechanical, 14A, Emission control, Fuel vapour absorber: Removal - Refitting**).

Listen to the operation of the solenoid valve by running command **AC017 Canister bleed solenoid valve**.

With the engine idling, disconnect the pipe at the solenoid valve inlet and check that there is no suction on your finger. (These steps allow the sealing of the solenoid valve to be checked for air tightness.)

Check the **cleanliness** and **condition** of the canister bleed solenoid valve connector, component code **371** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3FB** between components **371** and **1047**,
- **3BB** between components **371** and **120**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

With the ignition on, check for **+ 12 V** on connection **3FB** of component **371**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **resistance of the fuel vapour absorber bleed solenoid valve**.

If the resistance of the fuel vapour absorber bleed solenoid valve is not between: **24 Ω < X < 30 Ω** between **0°C** and **40°C**, replace the fuel vapour absorber bleed solenoid valve (see **MR 388 or 451, Mechanical, 14A, Emission control, Fuel vapour absorber: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 5

Additional fuel tank check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero.**

Check the cleanliness, mounting, possible leaks and the solenoid valve hoses (see **MR 388 Mechanical, 19C, Tank, Additional fuel system petrol pump: Removal – Refitting**).

Listen to the operation of the solenoid valve by running command **AC217 Additional petrol circuit solenoid valve**.

Check the **cleanliness** and **condition** of the connector of the additional petrol circuit solenoid valve, component code **1640** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **continuity, insulation, and absence of interference resistance** on the following connections:

- **3ACM** between components **1640** and **120**,
- **3FB** between components **1640** and **1047**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the supply of the solenoid valve using a test light, by running command **AC224 Additional petrol circuit pump relay**.

Check the internal resistance of the solenoid valve, component code **1640** on the computer connector, component code **120**, its value must be between: $24 \Omega < X \leq 30 \Omega$. If the resistance is not correct, replace the solenoid valve (see **MR 388 Mechanical, 19C, Tank, Additional fuel system petrol pump: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 6

Air temperature sensor check

Perform a visual inspection and look for possible sealing faults in the system.
Ensure the conformity of the system (see **MR 388 or 451, Mechanical, 12A, Fuel mixture, Air inlet: Description**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 7

Air inlet pressure sensor check

Check the fitting and sealing of the inlet air pressure sensor, component code **147** (condition of the seals) and look for possible leaks on the inlet air pipe. Ensure the conformity of the system (see **MR 388 or 451, Mechanical, 12A, Fuel mixture, Air inlet: Description**).

With the ignition on, compare the value of **PR312 Manifold pressure** for the vehicle concerned with that given by another vehicle (**absolute difference < 130 mbars**).

Check the **connection** and **condition** of the connector of the inlet air pressure sensor, component code **147** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the supply voltage of the sensor on connections **3AJR** and **3AJP**.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3AJP** between components **120** and **147**,
- **3AJR** between components **120** and **147**,
- **3AJQ** between components **120** and **147**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

With the ignition on, use a vacuum pump in order to create a variation in negative pressure. Then use the diagnostic tool to check that **PR312 Manifold pressure ≤ 500 mbar**.

Replace the inlet air pressure sensor, component code **147** (see **MR 388 or 451, Mechanical, 12A, Fuel mixture, Air inlet: Description**) and repeat the vacuum test.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 8

Accelerator pedal potentiometer check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Check the variation in **PR055 Engine speed** when depressing the accelerator pedal (with the engine running).

Stop the engine and switch on the ignition. Without action on the pedal, check that the voltage correction of circuit 1:

- **PR147 Pedal potentiometer voltage gang 1** is less than **817 mV** and
- **PR148 Pedal potentiometer voltage gang 2** is less than **440 mV**.

Then, in the "full load" position, check the voltage of circuit 1: **PR147** must be greater than **4185 mV** and **PR148** must be greater than **2013 mV**.

Also check the pedal position in the following cases:

- "position zero" (**PR030 Accelerator pedal position = 0**)
- "Full load" (**PR030 = 1**).

Stop the engine and then switch on the ignition.

With the vehicle under + **after ignition feed**, measure the voltage between the following connections:

- **3LR** and **3LT** of component **921**,
- **3LU** and **3LV** of component **921**.

If the value is not between **4.75 V ≤ X ≤ 5.25 V**, check **the insulation, the continuity and the absence of interference resistance** of the following connections:

- **3LR** between components **120** and **921**,
- **3LT** between components **120** and **921**,
- **3LU** between components **120** and **921**,
- **3LV** between components **120** and **921**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3LS** between components **120** and **921**,
- **3LW** between components **120** and **921**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

**TEST 8
CONTINUED**

Remove the **accelerator pedal**, component code 921 (see **MR 388, Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal – Refitting or 451, Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal – Refitting**).

Without action on the accelerator pedal, check the **resistance** between the following connections:

Gang 1:

- 3LT and 3LS of component 921, the **resistance** must be between $718 \Omega \leq X \leq 5263 \Omega$,
- 3LT and 3LR of component 921, the **resistance** must be between $838 \Omega \leq X \leq 1742 \Omega$,
- 3LR and 3LS of component 921, the **resistance** must be between $1312 \Omega \leq X \leq 6495 \Omega$.

Gang 2:

- 3LV and 3LW of component 921, the **resistance** must be between $701 \Omega \leq X \leq 5242 \Omega$,
- 3LV and 3LU of component 921, the **resistance** must be between $1495 \Omega \leq X \leq 3105 \Omega$,
- 3LU and 3LW of component 921, the **resistance** must be between $1978 \Omega \leq X \leq 7894 \Omega$.

If these checks are incorrect, replace the **accelerator pedal sensor**, component code 921 (see **MR 388, Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal – Refitting**).

If the fault is still present, contact the Techline.

With the accelerator pedal depressed to the end of travel, check the **resistance** between the following connections:

Gang 1:

- 3LT and 3LS of component 921, the **resistance** must be between $1361 \Omega \leq X \leq 6600 \Omega$,
- 3LT and 3LR of component 921, the **resistance** must be between $838 \Omega \leq X \leq 1742 \Omega$,
- 3LR and 3LS of component 921, the **resistance** must be between $668 \Omega \leq X \leq 5160 \Omega$.

Gang 2:

- 3LV and 3LW of component 921, the **resistance** must be between $1276 \Omega \leq X \leq 6436 \Omega$,
- 3LV and 3LU of component 921, the **resistance** must be between $1495 \Omega \leq X \leq 3105 \Omega$,
- 3LU and 3LW of component 921, the **resistance** must be between $1403 \Omega \leq X \leq 6700 \Omega$.

If these checks are incorrect, replace the **accelerator pedal sensor**, component code 921 (see **MR 388, Mechanical, 17B, Petrol injection, Accelerator pedal potentiometer: Removal – Refitting or MR 451, Mechanical, 37A, Mechanical component controls, Accelerator pedal: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 9

Brake pedal switch check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

With the brake pedal **released**, check **ET039 Brake pedal** and **ET799 Brake wire contact**.

ET039 must be **01** and **ET799** must be **01**.

While depressing the brake pedal, check **ET039** and **ET799**.

ET039 must be **02** and **ET799** must be **02**.

If these two checks are correct, the switch is not faulty.

Check the fitting and mechanical operation of the brake pedal (the pedal returns properly).

If the check is incorrect, check the braking system.

With the brake pedal **depressed**, measure the **resistance** of the **brake pedal switch**, component code **160** between connections **AP1** and **65A**, the value must be $X > 10 \text{ M}\Omega$.

If the **resistance** is not correct, replace the **brake pedal switch**, component code **160** (see **MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting**).

With the brake pedal **released**, measure the **resistance** of the **brake pedal switch**, component code **160** between connections **AP1** and **5A**, the value must be between $0 \Omega < X < 1 \Omega$.

If the **resistance** is not correct, replace the **brake pedal switch**, component code **160** (see **MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting**) and move on to the part: **Checking the brake pedal switch**.

Check the condition of the **brake pedal switch** connector, component code **160** (see **MR 388 or 451, Mechanical, 37A, Mechanical component controls, Brake pedal switch: Removal - Refitting**).

If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the presence and condition of the brake pedal fuse **F03 (10 A)**.

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **AP1** between components **160** and **1016**,
- **5A** between components **160** and **120**,
- **65A** between components **160** and **120**,

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 10

TDC sensor check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Check the fitting of the sensor (connectors, mountings, etc.) (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Crankshaft position sensor: Removal - Refitting**).

Switch on the ignition, check the change of the engine rotation speed using parameter **PR055 Engine speed**. The value must be between **0 rpm** and more than **120 rpm** when the starter is operating.

With the engine running, accelerate to obtain different engine rotation speeds and check that the engine speed correctly changes in relation to the accelerations.

If **PR055** varies, the sensor is sound.

Check the **cleanliness** and **condition** of the **TDC sensor**, component code **149** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **resistance** of the **TDC sensor** between connections **3BL** and **3BG** on the **injection computer** connector side, component code **120** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

The **resistance** must be between **175 Ω ≤ X ≤ 295 Ω**. If the value is not correct, replace the sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Crankshaft position sensor: Removal - Refitting**).

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3BL** between components **120** and **149**,
- **3BG** between components **120** and **149**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 11

Pinking sensor check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Start the engine and let it idle. Then, check that **PR427 Average pinking signal** is 0.

With the engine idling, check that parameters **PR469 Cylinder 1 pinking value**, **PR471 Cylinder 2 pinking value**, **PR473 Cylinder 3 pinking value**, **PR475 Cylinder 4 pinking value** are all 0.

Check the **cleanliness** and **condition** of the **pinking sensor** connector, component code **146** and of the injection computer connector, component code **120**.

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Check the **resistance** of the **pinking sensor** between connections **3DQ** and **3S** on the **injection computer** connector side, component code **120** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection computer: Removal - Refitting**).

The **resistance** must be: **X > 10 MΩ**.

If the resistance value is not correct, replace the pinking sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Petrol injection: List and location of components**).

Check the **insulation, continuity and the absence of interference resistance** on the following connections:

- **3DQ** between components **120** and **146**,
- **3S** between components **120** and **146**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 12

Additional fuel tank pump check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero.**

Listen to the operation of the additional fuel pump and of the petrol pump relay of the additional circuit by running command **AC224 Additional petrol circuit pump relay**.

Check the supply of the solenoid valve using a test light, by running command **AC224**.
If the supply is correct, replace the additional fuel pump (see **MR 388 Mechanical, 19C, Tank, Additional fuel circuit tank: Removal – Refitting**).

Check the **continuity, insulation, and absence of interference resistance** on the following connections:

- **3ACL** between components **1639** and **283**,
- **NH** between **earth** and **283**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the checks are correct, run fault finding on the Protection and Switching Unit.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 13

Injector check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Perform a visual inspection of the condition and possible leaks in the system.

Repair if necessary (see **MR 388 Mechanical, 13A, Fuel supply, Injector rail – Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**).

Listen to the operation of the injectors by running the commands:

- **AC005 Cylinder 1 injector,**
- **AC006 Cylinder 2 injector,**
- **AC007 Cylinder 3 injector,**
- **AC008 Cylinder 4 injector.**

Replace the injectors if necessary (see **MR 388 Mechanical, 13A, Fuel supply, Injector rail – Injectors: Removal – Refitting** or **MR 451, Mechanical, 17B, Petrol injection, Injector rail - Injectors: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 14

Ignition coil check

NOTES

Special note:

To apply this procedure, use special tool Elé. 1808: Ignition coil tester, available in the Parts Department catalogue.
part number: 77 11 381 808.

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

K4M engine

Perform a visual inspection of the condition of the connectors for the following: pencil ignition coil no.1, component code **1077**, pencil ignition coil no.2, component code **1078**, pencil ignition coil no.3, component code **1079**, pencil ignition coil no.4, component code **1080** (see **MR 388 or 451, Mechanical, 17A, Ignition, Coils: Removal – Refitting**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Insert tool **Elé. 1808 (1)** into the coil.

Place the tool/coil assembly in the spark plug well.

Start the engine and let it idle.

Apply light pressure to the assembly to hold the coil in contact with the tool.

Observe the glow from the electric arc on the spark plug well wall.

If the electric arc is not produced, replace the coil concerned (see **MR 388 or 451, Mechanical, 17A, Ignition, Coils: Removal – Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

**TEST 14
CONTINUED**

Ignition coil check

K7M engine

Perform a visual inspection of the condition of the ignition coil connectors, component code **778** (see **MR 388 Mechanical, 17A, Ignition, Coils: Removal – Refitting**).

If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector(s), otherwise replace the wiring.

Insert tool **Elé.1808 (1)** in the cap of the wire of the plugs concerned.

Fit the assembly in the plug well.

Start the engine and let it idle.

Apply light pressure to the assembly to hold the coil in contact with the tool.

Observe the glow from the electric arc on the spark plug well wall.

If the electric arc is not produced, replace the ignition coil (see **MR 388 Mechanical, 17A, Ignition, Coils: Removal – Refitting**).

If the fault is still present, contact the Techline.

D4D engine

– Switch on the vehicle + after ignition feed.

– Run command **VP036 FUEL SUPPLY INHIBITION**.

Put the vehicle under starting conditions:

– position of gear lever in neutral for a manual gearbox* or position "P" (Parking) for an automatic gearbox*.
– brake pedal depressed.

– Run command **RZ003 ENGINE ADAPTIVES**.

Remove the plugs from each cylinder and check, one after another, that sparks are present by bringing the plug close to a chassis earth, with the starter engaged. If no spark is produced, replace the ignition coil, component code **778** (see **MR 388 Mechanical, 17A, Ignition, Coils: Removal – Refitting**).

If the fault is still present, contact the Techline.

BVM*: Manual gearbox.

BVA*: Automatic gearbox.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 15

Coolant temperature sensor check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

If the fault is still present, contact the Techline.

With the engine idling: visually check that there are no leaks where the **coolant temperature sensor** is fitted, component code **244** (see **MR 388 or 451, Mechanical, 19A, Cooling, Coolant temperature sensor: Removal - Refitting**).

Switch off the engine. Wait for **15 minutes**, restart the engine and, for **10 minutes**, check that the temperature value given by the sensor increases, using parameter **PR064 Coolant temperature**.
If the value increases, the sensor is sound.

Check the condition of the **coolant temperature sensor** connector, component code **244** and of the **injection computer** connector, component code **120**.

If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the supply between connections **3JK** and **3C** of component **244**.

Check the **insulation, continuity and absence of interference resistance** on the following connections:

- **3JK** between components **244** and **120**,
- **3C** between components **244** and **120**.

If the connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, replace the **coolant temperature sensor**, component code **244** (see **MR 388 or 451, Mechanical, 19A, Cooling, Coolant temperature sensor: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 16

Fan relay check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Check the operation of the low speed fan assembly by running command **AC038 Low speed fan assembly relay**.
Check the operation of the high speed fan assembly by running command **AC039 High speed fan assembly relay**.

If these two checks are correct, the fan assembly relay is not faulty

Run command **AC038** and use the test light to check for the control signal of component **120** on connection **3JN** of component **700**.

Check the connection and condition of the **fan assembly** connector, component code **188** and of the **injection computer** connector, component code **120**.

If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity and absence of interference resistance** on the following connections:

- **3JN** between components **700** and **120**,
- **49C** between components **321** and **700**,
- **49B** between components **188** and **321**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Run command **AC038** and use the test light to check for the presence of supply at the relay output.

If the supply is absent, replace the **low speed fan assembly relay**, component code **700**.

Run command **AC039** and use the test light to check for the control signal of component **120** on connection **3JP** of component **336**.

Check the **insulation, continuity and absence of interference resistance** on the following connection:

- **49B** between components **336** and **188**,
- **3JP** between components **336** and **120**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Run command **AC039** and use the test light to check for the presence of supply at the relay output.

If the supply is absent, replace the **high speed fan assembly relay**, component code **336**.

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 17

Upstream O2 sensor check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Visually check the position and mounting of the upstream oxygen sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

With the engine warm, **PR064 Coolant temperature > 70°C**, depress the accelerator pedal and check that **PR098 Upstream oxygen sensor voltage** varies correctly between: **20 mV < PR098 < 1395 mV**. The variation must be greater than **50 mV**.

Check the connection and condition of the upstream oxygen sensor connector, component code **887** and of the **injection computer** connector, component code **120**.

If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity and absence of interference resistance** on the following connection:

- **3GH** between components **887** and **120**,
- **3GK** between components **887** and **120**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the resistance value of the upstream oxygen sensor, component code **887** on the computer connector side, component code **120**. With the engine stopped for **10 minutes**, the resistance value should be between **7 Ω and infinity**.

If the resistance is not correct, replace the upstream oxygen sensor, component code **887** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

Check that the **TDC*** sensor programming is correct (see the section on **Replacement of components**).

Run test **SC007 Run OBD test: O2 sensor** and start the engine (Only depress the brake pedal to authorise the starting of the engine).

At the end, check the test results:

STATUS1: Run the test again with the engine coolant temperature **X > 90°C**.

STATUS2 or **STATUS3:** Sensor OK.

STATUS4: Replace the upstream oxygen sensor (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal – Refitting**).

If the fault is still present, contact the Techline.

TDC*: TOP DEAD CENTRE

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 18

Downstream O2 sensor check

NOTES

See the **Wiring Diagrams Technical Note for Logan, Sandero, Duster.**

Visually check the position and mounting of the downstream oxygen sensor, component code **242** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

With the engine warm, **PR064 Coolant temperature > 70°C**, depress the accelerator pedal for **3 minutes**, perform several accelerations and check that **PR099 Downstream oxygen sensor voltage** varies correctly between: **0 mV < PR099 < 1000 mV**.

Check the connection and condition of the downstream oxygen sensor connector, component code **242** and of the **injection computer** connector, component code **120**.

If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity and absence of interference resistance** on the following connection:

- **3GL** between components **242** and **120**,
- **3GJ** between components **242** and **120**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Check the resistance value of the downstream oxygen sensor, component code **242** on the computer connector side, component code **120**. With the engine stopped for **10 minutes**, the resistance value should be between **7 Ω and infinity**.

If the resistance value is not correct, replace the downstream oxygen sensor, component code **242** (see **MR 388 or 451, Mechanical, 17B, Petrol injection, Oxygen sensors: Removal - Refitting**).

If the fault is still present, contact the Techline.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.

TEST 19

Fuel conformity check

WARNING:

During this operation, it is essential to:
refrain from smoking or bringing incandescent objects close to the work area,
protect yourself against fuel splashes due to residual pressure in the pipes, wear safety goggles with side guards and waterproof gloves (Nitrile type).

IMPORTANT:

To avoid any corrosion or damage, protect the areas on which fuel is likely to run.
To prevent impurities from entering the circuit, place protective plugs on all fuel circuit components exposed to the open air.

Remove 1 L of fuel at the fuel filter outlet (see **MR 388 or 451, Mechanical, 19C, Tank, Fuel tank: Draining**), using a pneumatic transfer pump (**part no. 634-200**) and place it in the 1300 ml plastic cup.
Cover the plastic cup with its cover and allow it to settle for approximately **2 minutes**.

Check if the fuel is cloudy or if it separates into two parts.

If the fuel is cloudy or if it separates into two parts, there is water in the fuel, the fuel is not correct.
Drain the fuel circuit, including the tank (see **MR 388 or 451, Mechanical, 19C, Tank, Fuel tank: Draining**).

Visually compare the fuel removed with the correct petrol.

Are the samples identical?

If the samples are identical, this means that the fuel is correct.
Otherwise, drain the fuel circuit, including the tank (see **MR 388 or 451, Mechanical, 19C, Tank, Fuel tank: Draining**).

Note:

Contact the Techline if you have doubts or problems with the customer.

AFTER REPAIR

Carry out a road test, then check with the **diagnostic tool**.